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CONTENTS

	PAGE
Editorials	461
Letters to the Editor	464
The Scrap Heap	465
Overseas Railway Affairs	466
The Present Railway Position in China	467
Oil-Burning Locomotives for the Middle East	469
An Important Swiss Railway Development	472
Railway News Section	477
Personal	477
Transport Services and the War	480
Stock Market and Table	488

DIESEL RAILWAY TRACTION SUPPLEMENT

The November issue of THE RAILWAY GAZETTE *Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price* 1*s.*

GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as an indication that they are necessarily available for export

DISPATCH OF "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.*

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas, as they are stopped under the provisions of Statutory Rules & Orders No. 1190 *of* 1940, *and No.* 359 *of* 1941

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

From Monday next, November 10, *and until further notice our office hours are:*

Mondays to Fridays 9.30 *a.m. till* 3.45 *p.m. The office is closed on Saturdays*

More Efficient Use of Transport

AS was briefly recorded in THE RAILWAY GAZETTE last week the Minister of War Transport has announced the Government's decision to take measures which should ensure the more economical use of all means of goods transport. Among the steps which are to be taken are the elimination of all avoidable cross-hauls and the curtailment of the haulage of goods over long distances wherever alternative goods can be obtained from nearer sources of supply. The Minister's assurance that Government departments have already taken measures of this kind in respect of their own traffics is to be welcomed, for in view of the greater volume of Government traffic which at present is being moved, it is obvious that this offers a fruitful field for economy. Similar arrangements are also being made with representative bodies of traders to secure economy in the transport of general commercial traffic; in this way it is hoped to ensure that the rapid development of war industries will not outpace the speed and capacity of transport. The successful operation of the policy outlined by the Minister will, of course, depend to a large extent on the work of the Central Transport Committee, the Railway Executive Committee, and the Transport Departments of the Ministries of Supply, Food, Aircraft Production, and the Board of Trade. These organisations for some time have been considering how transport can be saved, and meetings have been held between representatives of the railways, the collieries, and general industry to see how far arrangements can be made for consumers to draw their supplies from the nearest sources.

Q for V

On October 30 the Minister of War Transport announced the opening of a nation-wide campaign for the quicker turn-round of wagons, vans, lorries, barges, canal boats, and, indeed, every type of vehicle used for the movement of war supplies. The letter "Q" is being used as the symbol for this campaign, of which further details are given at page 483; transport workers will find it displayed at stations, and loading bays, and business men are to have their attention called to it in correspondence. This campaign follows the successful drive last winter to speed the turn-round of ships, as a result of which a saving in time was effected equivalent to an addition to our merchant fleets of many hundreds of thousands of tons. The need for the present effort arises from the strain which is now being placed increasingly on the inland transport services due to the expansion of war industries, and the impossibility of obtaining new vehicles, rolling stock, and running lines to the extent required. It is estimated that to meet all demands the transport industry would require at least 100,000 more wagons and lorries which it will not be possible to provide. To offset this lack extensive new works, costing some £6,000,000, are being completed on the railways, and the bulk of these will be ready to afford valuable relief this winter. They include new loops and sidings, and running lines, and the improvement and enlargement of exchange junctions. At the same time the organisation of each of the main branches of the transport industry is being strengthened, more mobile cranes are being provided, and every means taken to effect saving in time and labour.

Essential Work Order for Railways

As was briefly announced in THE RAILWAY GAZETTE last week, the Minister of Labour & National Service has applied the Essential Work Order, with effect from October 27, to the controlled railway undertakings. Details of the Order are given at page 487, where it is shown that modifications of the general Order have been made to give effect to the wish of all parties in the industry that the existing agreed disciplinary arrangements should continue in effect rather than be replaced by those specified in the general Order. At first sight it might seem strange that concerns such as the railways, which are not only controlled undertakings, but are obviously engaged upon essential work, should not have been the subject of the Order much earlier. Broadly, when an undertaking is scheduled under an Essential Work Order the effect is that the right of the management to discharge,

and of the personnel to leave, is controlled, and is subject to written permission of a National Service Officer; a guarantee of a certain minimum time-rate of wages is given, subject to specified conditions; and cases of persistent absenteeism are dealt with under special procedure. It will be clear, of course, that in the railway services some of these conditions already apply, hence the modifications in the general Order. The London Passenger Transport Board is not at present covered by the Order; its position is still under discussion.

Canadian National Railways Presidents

A tribute to men who have held the Presidency of the Canadian National Railways is contained in a leading article in a recent issue of *The Ottawa Journal*. The occasion which prompted it is the retirement of Mr. S. J. Hungerford who, as announced in THE RAILWAY GAZETTE of August 1, is succeeded by Mr. Robert Charles Vaughan. *The Ottawa Journal* says that Mr. Hungerford was not as spectacular in his methods as the late Sir Henry Thornton, and goes on to point out how lacking in vision were some of those who at one time thought that a loss of $50,000,000 for a first class transport system, in a country where transport is vital, was going to bankrupt Canada and who urged that only by tearing up hundreds of miles of the rails of the national system could salvation be achieved. It points out, too, the effect that adoption of this advice would have had upon Canada's present war effort and declares that even in its worst years of depression the Canadian National was never the white elephant its critics declared. On the contrary in only three years had the C.N.R. failed to have an operating surplus and during its whole period of life had paid some $300,000,000 towards its fixed charges. The criticisms which were levelled at Sir Henry Thornton during his lifetime have been answered by the results which have been achieved through his foresight.

Education and the Examination Problem

Engineering education was the subject taken for his presidential address to the Institution of Civil Engineers last Tuesday by Professor C. E. Inglis. He considered that the primary duty of a university was to cater for the needs of the future civilian engineers—men destined to hold positions of high and varied responsibility. Education, rather than specialised training, should be the university ideal, and it could not be too strongly emphasised that education was something much wider and more profound than mere instruction. Mathematics must occupy a prominent position in any engineering course; but it was merely a means to an end, namely, the solution of engineering problems. Dealing with the examination system, Professor Inglis stated that even its most bitter critics had no clear-cut alternative to suggest, but he admitted that education, particularly in Great Britain, suffered from a surfeit of examinations. This problem of examinations is one which has grown in magnitude with the attempt to concentrate the acquisition of book-learning into too brief a period. Too much depends on a good memory and not nearly enough on sound knowledge, by which we mean knowledge gained by experience or the verification of alleged facts. There are comparatively few students who, in our experience, can acquire genuine knowledge at the rate demanded by university curricula, and the result is that, in order to pass examinations, it is necessary to commit to memory what is written in books, without the possibility of verifying more than a small proportion of the authors' statements. This problem of examinations awaits the age of leisure for its true solution.

Doubling on the Gotthard Line

The doubling of the Brunnen—Flüelen section of the Gotthard main line in Switzerland, to which reference was made at page 423 of our October 24 issue, will provide this important route through the heart of the Alps with 102·5 miles of continuous double line from Immensee to Rivera-Bironico. Doubling is also in progress over the 4·0 miles from Taverne to Lugano, and when these two projects are complete, the only remaining single-line sections will be from Lucerne to Immensee, 11·9 miles; Rivera-Bironico to Taverne, 5·5 miles; and over the Lake of Lugano causeway from Melide to Maroggia, 2·4 miles. The section from Brunnen to Flüelen is of particular interest to travellers in Switzerland, as it lies along the most spectacular part of the Lake of Lucerne, where the lake takes a right-angled bend to the southwards between towering cliffs, backed by snow-capped mountains. The railway here lies in large part beneath the famous Axenstrasse, a road which itself passes through numerous tunnels, and the cliffs to which reference has just been made are responsible for nine railway tunnels, the four longest of which—Hochfluh, Oelberg, Stutzeck, and Axenberg—have lengths of 638, 2,122, 1,080, and 1,224 yd. respectively. A little over 3 miles of the 7·3 miles of line now in course of doubling between Brunnen and Flüelen is carried in tunnel, and this fact, with the awkward lakeside location of the line, is responsible for the high estimated cost of Swiss fr. 23,000,000 for this work. The next section to be tackled will probably be from Rivera-Bironico to Taverne, which should present no great difficulty, but the Lucerne—Immensee section is of less importance, as much of the Gotthard traffic, routed *via* Zurich, leaves or joins the main line at Arth-Goldau, and so does not pass between Immensee and Lucerne.

Adding Pullmans to "All-Coach" Flyers

It is a common enough event in the United States nowadays for an all-Pullman train to be supplemented by a luxury all-coach service provided for the equivalent of the British third class passenger, at roughly equal speed. The latest American example is the Jeffersonian of the Pennsylvania Railroad, which for the first time provides "streamline coach luxury" over the 1,051-mile route between New York and St. Louis, in a 20¼-hr. run, and leaves the famous Spirit of St. Louis as a Pullman train exclusively. But for a popular all-coach flyer to acquire Pullman sleepers is a new phenomenon. This has happened to the Silver Meteor of the Seaboard Air Line Railway, running between New York and the Florida coast resorts, and so well patronised that its original seven-car consist was increased last winter to fourteen cars. During the past summer season this became a combined luxury coach and Pullman train, serving both sides of the Floridan peninsula. The same thing has happened to the competing all-coach Champion of the Atlantic Coast Line, which for the summer combines with the Tamiami, and becomes the Tamiami Champion, run in two sections, one for Miami on the east coast, and the other for Tampa on the west coast. The new all-coach streamliner Tennessean of the Southern Railroad, again, running between Washington and Memphis, is used west of Bristol to carry the Pullman sleepers of the previous Memphis Special.

Running Rights in the U.S.A.

Nearly 7 per cent. of the total railway route mileage in the U.S.A. is shared by two or more railways. Most of the running rights are over short stretches at terminals, but about 50 are over lengths of more than 20 miles and some are over 100 miles. In the aggregate the route affected is 27,261 miles out of a total of 391,435 miles. The *Railroad Magazine* which, in its October issue, publishes a survey of "trackage rights," as they are called on the other side of the Atlantic, states that the highest percentage of leased track is in the Middle Atlantic States and the lowest is in the South, but between Virginia and Florida the Southern Railway uses Atlantic Coast Lines track for two stretches which total 325 miles. Canadian lines share no track in the U.S.A. apart from 56 miles between Mattawamkeag and Vanceboro, on the Maine Central, used by the C.P.R. On the other hand several U.S.A. railways have rights over Canadian metals. Outstanding is the Wabash, which in all has rights over 261 miles of Canadian track. In addition it has the use of 156 miles of route in the U.S.A. owned by other companies. With a total of 417 miles, or 16 per cent. of its total mileage, the Wabash has the greatest aggregate of running rights of any American railway.

XUM

The Salvage Drive

FROM an early stage in the war railway undertakings have had in operation extensive and well-planned schemes for the recovery of salvage, and we have frequently made reference to the measures they have adopted for ensuring that recoverable materials which may be of assistance to the war effort are not allowed to go to waste. In the great field of ancillary industries which are linked with the railways there is no doubt, too, that steps have already been taken to comply with the exhortations which have been made from time to time by Government spokesmen to conserve all forms of salvage and to ensure that it is made possible to re-use as great a proportion as feasible in order both to ease the strain on the supply and transport of raw materials, and to make good deficiencies where they exist. The Minister of Supply, Lord Beaverbrook, has called for a particularly intensive effort to be made in the salvage of waste paper of which the Ministry requires forthwith 100,000 tons; it is no less than true that waste paper is an essential munition of war. It is vital in the production of many of the most modern forms of munitions, and at the present time it is impossible to over-emphasise the responsibility which lies upon every business undertaking and every individual to play a full part in that direction.

By the amount that the salvage of waste paper in this country increases, shipping space will be freed for other purposes, one of which will be the carrying of munitions, themselves containing the product of the paper salvage campaign, to our Russian allies. At the present time much waste paper is imported into this country from North America, and 25,000 tons of shipping is employed in this way. It is obvious, therefore, that the reduction of the import traffic is a matter of first importance. When one considers, too, the vast variety of munitions in the manufacture of which waste paper forms an essential part it will be clear that its collection at the present juncture is a matter of high service to the nation and an essential part of the war effort in which all sections of the community can and should co-operate. One ton of waste paper would produce 1,500 shell containers, or 9,000 shell-fuse components, or 11,000 mine assemblies, or 47,000 25-pounder shell caps, to give but a brief list. In every commercial house and in every home in the country papers are stored away which could well be turned over to useful service at this juncture; correspondence, bills, circulars, notes, memoranda, books of records and reference, and in a thousand and one other forms paper can be found by those who will seek it. Every scrap of paper which can be turned over will play its part in furthering the war effort. It behoves all, therefore, to turn over their waste generously, though not rashly at the expense of historic documents, and at the same time to take all steps to economise in their current usage of a vital commodity.

The Netherlands Railways in 1940

ACCORDING to the recently-issued annual report for 1940 of the Netherlands Railways, revenues for the months January to April were 8,500,000 fl. higher than for the corresponding period of 1939, whereas expenditure was only 3,000,000 fl. higher, so that the expectation at the time was that the year might end without a deficit. As it turned out, revenues were up by 14,000,000 fl., and expenditure by 11,500,000 fl., so that there was still a deficit on the year's working of 15,000,000 fl. Rates and fares were raised during the year, and after the German invasion all reduced passenger fares were cancelled; goods transport was arranged on certain priority rules. An interesting measure was that goods trains were now run by day, with a considerable increase in times in transit of all except highly perishable goods which were conveyed by passenger train. Maximum running speeds were introduced: they were, 100 km.p.h. for electric trains, 80 km.p.h. for steam passenger trains, and 50 km.p.h. for goods trains. With goods trains running in daytime, passenger services were drastically curtailed. As competition from shipping lines, and from Belgian and French railways ceased, the report says, freight rates to Scandinavian countries and to Switzerland were increased by 30 per cent. Those to Germany and occupied territories remained unaltered. Numbers of closed stations were reopened, and sections scheduled for closing to passenger traffic were kept open or reopened. At the end of the year 3,314 km. (2,070 miles) of line were open, of which 1,685 km. (1,050 miles) were double and 1,630 km. (1,020 miles) single track. Included in the total were 352 km. (220 miles) open to goods only, of which 17 km. (10 miles) were double track; 527 km. (330 miles) were electrified. Below are given comparative financial results for 1939 and 1940 :—

	1939 Fl.	1940 Fl.
Revenues :—		
Passengers	60,620,417	62,416,362
Luggage	1,069,967	1,331,587
Mails	2,646,489	1,177,920
Goods	42,537,559	55,463,876
Livestock	401,121	690,218
Ancillary services	2,874,770	3,155,882
Total revenues	110,150,323	124,235,845
Operating expenditure	88,605,000	92,510,104
(including salaries and wages)	(63,100,000)	(62,300,000)
Operating ratio	80·6	74·4
Depreciation (not including war damage)	24,767,000	32,372,000
Interest on capital	14,200,000	14,200,000
Deficit	17,456,000	14,876,000

Some further details of operating conditions are given in "Transport Services and the War" at page 481.

Inter-Company Rolling Stock Pool

THE rapid distribution of a million and a quarter railway wagons over the 50,000 miles of tracks in this country involves a large exchange of empty wagons between companies and this is controlled by the Inter-Company Freight Rolling Stock Control which has been in active operation for the past eight months. In peacetime the railways' freight services each year moved 260,000,000 tons of freight involving a freight train mileage of 129,000,000 miles This was equivalent to 6 tons a head of the population. In wartime these figures are greatly increased. As is shown below, the pooling of railway wagons in order to avoid the running of many empty trains has been successfully worked for many years. After the commencement of the war this pooling arrangement was extended to cover the special vehicles used for carrying meat and other perishable traffics, and also all wagon sheets and ropes. The 600,000 privately-owned wagons which were requisitioned by the Government were added to the pool and came under the central control. Railway wagon control is an essential feature of efficient goods train working as it ensures that wagons of the types required are supplied promptly. Local stationmasters and railway officials keep close contact with traders and at stipulated times every day the position is reviewed and estimates compiled of the number of each type of wagon anticipated to be needed to meet the next day's requirements, including the special types of wagons of which the railways have over 50,000. These special wagons which are used for such articles as heavy machinery, stern frames of ships, propellers, large castings, boilers, girders, steel plates, guns, tanks, and aircraft require to be individually dealt with, and this is done by means of card index systems which enable a constant record to be kept of the work each vehicle is doing and where and when it is likely to be ready for its next job.

From the beginning of March last an Inter-Company Freight Rolling Stock Control has operated freight rolling stock in this country on a development of the common user basis. Details of the control were given in THE RAILWAY GAZETTE of February 14 and March 14 last. The practice of common user of freight rolling stock was brought about during the war of 1914-19 and has continued with fluctuations since that time. Under the common user scheme stations are able to use specified types of wagons and sheets owned by any company for loading in any direction irrespective of ownership, and a number of advantages resulted from the practice. Among these are the elimination of cross haulage of empty wagons and sheets; less shunting at terminal points, exchange junctions, and marshalling yards; a reduction in empty wagon mileage, and greater utility of wagons and sheets. The term common user as applied to wagons and sheets does not mean the establishment of a common pool from which any company may draw as required, but merely an arrangement for setting one wagon or sheet against another. The common user scheme worked

very satisfactorily under pre-war conditions and the incidental balancing arrangements enabled each company to maintain a stock of wagons equivalent to the number contributed to the pool. Since the outbreak of war, however, the flow of traffic has considerably altered, involving material changes in the normal demands for wagons. In addition the companies became responsible for the control of the very large number of privately-owned wagons requisitioned by the Government and the demands for such wagons on particular companies have proved to bear little relationship to the number previously owned by traders on their respective systems. In these circumstances the abandonment of the principle of conserving to each company a stock of wagons equivalent to its share of the pool was a logical step as it would enable wagon demands to be met more expeditiously and also reduce empty wagon mileage. Accordingly, therefore, the Inter-Company Freight Rolling Stock Control was established with the object of increasing the use obtained from the stock of 1,240,230 wagons of various kinds, 408,000 sheets, 219,000 ropes, and 2,800 meat containers.

The establishment of this control by the Railway Executive Committee was a natural development of the pooling arrangements which, as indicated in the table below, have been steadily expanded from a comparatively modest beginning in 1915. Before its establishment the various methods

TABLE SUMMARISING HISTORY OF COMMON USER ARRANGEMENTS

G.C.R., G.E.R., and G.N.R.—Open wagons (un-fitted), 3 planks deep and upwards	December 13, 1915
G.W.R., L. & Y.R., L. & N.W.R., Mid. R. and N.E.R.—Open wagons (unfitted), 3 planks deep and upwards	April 2, 1916
Scottish companies—Certain open wagons (un-fitted)	June 5, 1916
All companies in Great Britain—Open wagons (unfitted), 3 planks deep and upwards	January 2, 1917
Extended to other types of open wagons, principally Scottish companies' "end doors"	April 2, 1918
All companies in Great Britain—Covered vans (unfitted)	June 3, 1919
Certain companies—Four-wheel single and twin bolster wagons	March 1, 1922
All companies—Cattle wagons (except G.W.R.) (fitted and unfitted)	August 11, 1925
All companies—End door mineral wagons of 12 tons and under	February 14, 1926
G.W.R.—Four-wheel single bolster and cattle trucks	May 31, 1927
All companies—Pig-iron wagons of 20 tons and under and end door mineral of over 12 and up to 20 tons	July 24, 1927
G.W.R.—Cattle wagons, *withdrawn*	December 31, 1927
L.N.E.R. and S.R.—Double bolster, between those two companies	May 14, 1929
L.N.E.R., L.M.S.R., Met.R. and S.R.—Cattle wagons fitted with auto brake, *withdrawn*	September 1, 1933
L.N.E.R., L.M.S.R., Met.R.—Open wagons fitted with vacuum brake	October 9, 1936
L.N.E.R., L.M.S.R., S.R. and Met.R.—Covered wagons fitted with vacuum brake	
Requisitioned private-owners' wagons	September 3, 1939
All companies—Open over 13 tons up to and including 21 tons	
Plate, long low, lowfit	
Twins not fitted with bolsters	
Bar iron	September 5, 1939
G.W.R. covered, V.B.	
G.W.R. cattle, unfitted	
All cattle fitted with V.B.	
Double bolsters	
L.N.E.R. and L.M.S.R.—Insulated meat containers and attendant chassis wagons and insulated meat vans	August 15, 1940
All companies—Banana vans, insulated meat vans, and insulated meat containers, and their chassis wagons	November 11, 1940
All companies—Ventilated meat vans, and ventilated meat containers, and their chassis wagons	December 9, 1940
Common User of Sheets: Commenced February 14, 1917	
Common User of Ropes: Commenced August 1, 1917; terminated August 1, 1921	
Extension of control of Common User by the establishment of an Inter-Company Freight Rolling Stock Control on March 1, 1941	

for the control and distribution of freight rolling stock on each railway system were carefully examined. It was necessary to provide for the synchronisation and uniformity of the freight rolling stock returns compiled at stations and the consequent unification of the instructions relating to control and distribution. Standard forms and codes of instructions were issued which provide for returns of wagons, sheets, and ropes on hand to be taken at each station at 10 a.m. daily and for these details, together with the anticipated requirements for the following day, to be communicated to the district offices by 12 noon. The district offices summarise the particulars, telephone them to the headquarters of their company, which in turn telephones the all-line position to the rolling stock control the same afternoon. After consultation with the companies the control decides what adjustments are necessary between the companies to meet the anticipated requirements and issues orders for the transfer of stock accordingly. The control acts in the capacity of a co-ordinating authority representative of all the railway companies and has an over-riding control over the disposition of stock, but does not interfere in any way with the internal distribution of stock by the individual companies. The balancing arrangements between the companies have been suspended and the available freight rolling stock is utilised irrespective of ownership to meet the requirements of trade and industry wherever they may arise. The new control arrangements have worked satisfactorily during the summer but the heavier traffics of the autumn and winter, combined with the difficulties associated with operating under blackout conditions, will provide a very exacting test for the new organisation.

Mr. T. E. Batty, as was announced in THE RAILWAY GAZETTE of March 14, is Chairman of the organisation; he was previously assistant rolling stock controller for the L.N.E.R. and has unique knowledge of all questions affecting rolling stock. In the table on this page the history of common user arrangements is summarised.

LETTERS TO THE EDITOR

(*The Editor is not responsible for the opinions of correspondents*)

Railways and "Suburban" Traffic

London Midland & Scottish Railway Company,
Advertising and Publicity Department,
Press Office, Room 8,
Euston, London, N.W.1
October 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I am somewhat surprised that your correspondent, Mr. Chas. S. Lake, should find difficulty in understanding the railways' application of the term "Suburban" to their local London services. He quotes, as an example of the elastic use of this term, the inclusion of Bedford and Bletchley in the area from which first class travel has been eliminated.

Mr. Lake is probably aware that the inclusion of these places is entirely due to the necessity for the balancing of rolling stock. Further, it is, I think, a fact that 99 per cent. of the services affected by the abolition of first class accommodation lie within the area which few would hesitate to label suburban.

"Suburban services" have for long been regarded by the railways as those services which cater for those members of the public who travel daily backwards and forwards between their homes and London. There is no evidence, other than that offered by your correspondent, to show that the travellers concerned have ever taken exception to a word which, by long usage, has become generally accepted and understood.

I am sure that Fowler would agree with this view.

Yours, etc.,

G. H. LOFTUS ALLEN,
Advertising and Publicity Officer

Superheaters of Types A and E

As boilers increased in size, and firebox volumes became bigger, the heat absorption capacity of the firebox surfaces tended to reduce the amount of heat available in the flues for superheating the steam, and this just at a time when it was being recognised that superheat temperatures above the prevailing 250° F. were both practicable and desirable. Therefore, in America, where the problem was most acute, the "E" type superheater was developed to replace the then standard "A" type. The "A" type had 24 to 50 flues of 5 in. to 5½ in. diameter, each housing four superheater elements, but in the "E" type the sizes of the flues has been reduced to about 3½ in. and only two elements per flue carried, but the number of flues has been increased to an extent at which something like 90 per cent. of the gas area is provided by them. By this means the superheating surface can be increased by 80 to 90 per cent. without any reduction in the area of the evaporative surface, and with desirable increases in the gas area through the boiler and the steam area through the superheater, which, it is claimed, lead to an increased evaporative capacity as well as to a higher standard of superheating.

THE SCRAP HEAP

When a man was fined £1 with five guineas costs at Hendon recently for assaulting a guard on a train travelling to Wembley Park, it was stated that he was annoyed at having boarded the wrong train.

* * *

FELO DE SE: FIRST CLASS

[Newspaper headline: "First Class Trains to Go."]

Henry ffolliot FitzHobbs
Was the very Prince of Snobs;
Knowing, even in his cot,
Who was who and what was what;
Steering, as a little boy,
Clear of cads and hoi polloi;
Scorning, later, tram and bus
(Both were too promiscuous);
Only taking cabs when stated
To be freshly fumigated.
One concession, though, he made
To the thing he called his "praid":
In a democratic burst
He would often travel First
(Though it went against the grain)
In a common railway train.
Handing out a bob or more
To the guard to lock the door.
There in solitary ease
He would practise frowns that freeze,
Or investigate his *Times*
For the masses' latest crimes. . . .
What he felt you'll gather now
As he read, with furrowed brow,
That a Mister So-and-so
Had decreed the Firsts must go!
Murmuring (for his soul was sick)
Synonyms for Bolshevik,
Henry, through the window-pane,
Cast himself beneath the train . . .
Consolation curbed the sobs
Of his friends and fellow-snobs
When the coach that was his croaker
Proved to be a First Class Smoker.

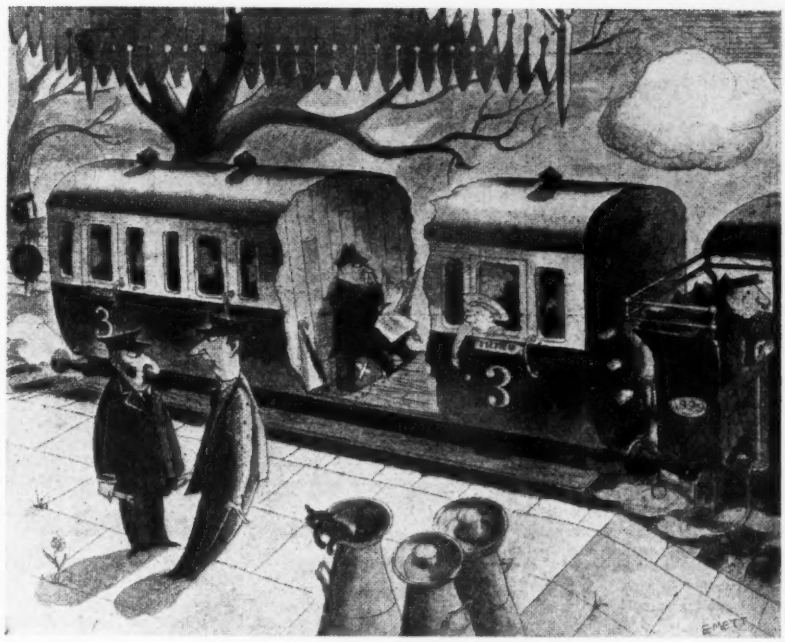
A. M. L.

From "The Manchester Guardian."

* * *

THE THIRD CLASS PASSENGER IN 1845

Down to 1845 he had no legal status at all, many companies would not carry him at any price, others put him in an open goods truck, with moveable seats placed across it, and charged him 1½d. a mile for the luxury, too. He was conveyed with other unclean animals by cattle trains, he was shunted about in his bufferless box for hours, and when at last he reached his destination it was to see a notice that "the company's servants are strictly ordered not to porter for waggon passengers." A delightful conveyance often used for third class traffic was known as a "Stanhope." It consisted of a box, about 18 ft. long, divided into four compartments by two wooden bars crossing each other in the middle. The absence of seats, however, was the last "straw," travellers rebelled, and the Stanhopes were not long in use. Of course, we must take into consideration that few people besides men of business and the wealthy travelled at all, much less the humbler classes.—*From the "Cornhill Magazine" of* 1892.



"I keep TELLING 'im we've done away with first class"

[Reproduced by permission of the proprietors of "Punch"

* * *

An analysis of the passenger traffic of the twelve leading English railways for the first half of 1892 shows that 10·85 per cent. of their passenger receipts was derived from the first class, 7·43 per cent. from the second class, 71·47 per cent. from the third class, and 10·25 per cent. from season tickets.

* * *

The trains on the Birmingham & Gloucester Railway are to begin next week to run by night as well as by day; on that account gaslights are now being laid along the line."—*From the "Cheltenham Free Press" of August* 10, 1840.

Glasgow, Paisley & Greenock Railway.
NOT TRANSFERABLE.
TIME TICKET No
For a
FIRST CLASS CARRIAGE
BETWEEN
Glasgow and Greenock,
Till
GREENOCK,
185
NOT TRANSFERABLE.
This Ticket to be shewn to the Agent, Guard, or any Officer of the Company when required, & delivered up at the expiry of the time specified on it
First Class Carriage,
not entitled to use this Ticket when travelling solely on the Joint Line, that is, from Glasgow to Paisley, & from Paisley to Glasgow.

Blank first class season or "time" ticket of the Glasgow, Paisley & Greenock Railway as used in the 1850's

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

NEW ZEALAND

Government Railways' Record Revenue

Since 1938, when the gross earnings for the financial year were the highest recorded till then, Government railways revenue has consistently shown a substantial upward trend. For the year ended March 31, 1938, gross revenue was £8,634,186; for the year ended March 31 last it had risen to £11,160,218. Net revenue also improved considerably; the return of £1,694,644 bettered that of the previous year by no less than £505,613 or 42·52 per cent.

In his statement on the working of the Railway Department, tabled recently in the House af Representatives, the Minister of Railways, Mr. Semple, pointed out that this very satisfactory result of the year's working was largely attributable to restrictions in the use of petrol, increased output of primary and secondary industries, and transport of troops, three abnormal factors which had combined in causing greater use to be made of railway facilities than ever before.

North Island East Coast Line Signalling

Construction of the important extension of the North Island East Coast line from Wairoa to Gisborne is progressing satisfactorily, and it is hoped that the completed through line will be open for traffic early in 1942. On the Napier-Wairoa section of this line, which has been in use for several years, installation of automatic, three-aspect, colour-light signalling is being pushed along rapidly. Already this system is in operation on the 39-mile stretch from Napier to Putorino and shortly the remaining 34 miles to Wairoa will also be completed and brought into use. Ultimately, as material and equipment become available, this signalling system will be extended right through to Gisborne.

Waiau Bridge, South Island Main Trunk Line

The construction of the new Waiau bridge on the South Island main trunk line has proved a difficult problem, and after more than two years' work, the contractors have but recently completed the reinforced concrete piers of the new bridge which is to replace the old wooden structure at present used for both rail and road traffic. Frequent floods not only delayed systematic progress but caused much damage to plant; pile-driving monkeys and a traction engine have been among the valuable equipment washed away. However, the piers are now ready to receive the steel-work which will comprise 54 steel plate-girder spans each 42½ ft. long. When complete the total length of this bridge, which will be an important link in the continuity of the end-to-end South Island Main Trunk line, will be 2,295 ft.

Completion of the Buller Gorge Railway

Another new line of national importance now practically complete is the Buller Gorge railway. For years the Westport line (29 miles in length) has existed as an isolated section but within a month or so the 27-mile connecting link with the South Island main line system will be opened for traffic. Formation, bridges, and other works have been finished and less than two miles of platelaying remain to complete a project begun as long ago as 1904. Beginning and suspension of the work from time to time by various administrations caused the line to advance very slowly, but in 1936 the present Government restarted the job as part of its extensive programme of railway construction, and have since maintained continuous activity upon it.

The Buller district, which will now be brought into direct rail communication with the rest of the South Island, is the richest coal-producing area in New Zealand. Hitherto the output of the many mines on the short coastal line was railed to Westport from where it was shipped to the distributing points. Now, however, most of this traffic, together with that from several other mines to be opened shortly along the route of the new line, will be railed direct to the industrial centres of the South Island.

NEW SOUTH WALES

Dining Cars being Converted to Buffet Cars

Government Railways dining cars Nos. 91 and 92 are being converted into buffet cars for the Riverina expresses. From them light meals will be served in the compartments of these trains as little time is allowed for refreshments at intermediate stops. The kitchens are being altered and the chairs and tables in the saloons are being replaced by lounge chairs for first class passengers. Eventually the Riverina expresses will be served by new buffet cars provided with counters.

Tourist Area for Cheap Tickets

For purposes of excursions, the Government Railways have been working for some time to a specified tourist area within or without which cheap tickets are issued. For instance, in August return tickets were issued at single fare—with minima of 2s. 3d. first and 1s. 8d. second class—between any two stations within that area, every Friday, Saturday, and Sunday, available for return until the Monday following. On specified dates excursion tickets were issued to and from stations outside the area, also at single fare for the return journey, but with 3s. and 2s. 3d. minima, provided one or both stations are outside the area. These return tickets were available for two months. The limits of the area are Newcastle, Dungog, and Singleton to the north, Mudgee, Orange, and Oberon to the west, and Crookwell, Canberra, and Captain's Flat to the south-west and south; Sydney is the central point.

Pusher Engines Increase Goods Loadings

Goods trains may now be assisted by pusher engines between Hawkesbury River and Cowan, thus enabling 1,000-ton trains to be run between Broadmeadow yard and Enfield with two engines. The new ruling also enables two-engine 1,000-ton trains to be worked from Werris Creek to Enfield, assisted by a pusher between Willow Tree and Ardglen, and from Hawkesbury River to Cowan.

CHINA

The Adventures of the Shanghai Express

In THE RAILWAY GAZETTE of August 8 last, it was recorded that among the well-known crack Pullman and other express trains now based on Hengchow on the Canton-Hankow Railway was the famous Blue Express that ran between Shanghai and Peking in peacetime. It now appears that a few hours before the Japanese entered Shanghai a locomotive and the 10 *de luxe* cars of this train were loaded on to barges by night and towed, each barge by a separate steamer, up the Yangtze to Hankow. As towing was carried out only by night, this normally five-day journey of 600-700 miles, took a fortnight. For several months the train was used to evacuate refugees from the Yangtze area southwards. Later, when Hankow was evacuated by the Chinese Government, it was used to move officials and documents to safety. At present the express is running between Hengchow and Liuchow some 300 miles to the south-west.

How the Free Chinese Obtain Track Materials

The question has been raised as to how the Chungking Government is obtaining rails and other permanent-way materials for the hundreds of miles of new railways it is constructing in Western China. It is reported that in the Japanese-occupied areas guerrillas are in the habit of dismantling the tracks during the hours of darkness, hiding them, and subsequently carrying them at night by a system of secret relays into Free Chinese territory. As the Japanese usually hold only narrow belts of country along the railways, and are not in sufficient strength to move far afield from these lines, such methods are possible among the millions of Chinese patriots surrounding the Japanese lines of communication.

CEYLON

Higher Rates and Fares being Considered

The Financial Secretary to the Government recently summoned a conference of railway officials, including the General Manager and the acting Commercial Superintendent, to consider the proposal to increase railway rates and fares. The tentative proposal put forward by the Treasury is to raise the rates and fares by 25 per cent. The question of special concessionary rates charged to those who have entered into contracts with the railway to transport a specified volume of goods was also considered at this conference.

UNITED STATES

Santa Fe Alignment Improvements

The Atchison, Topeka & Santa Fe Railroad has been easing the curvature of its Chicago-Los Angeles main line traversed by a fleet of streamline passenger and fast freight trains. On the Illinois and Missouri Divisions some 38·6 miles of line have been relocated, this work involving the moving of over 2,230,000 cu. yd. of earth and rock entirely by mechanical means. This part of the work was carried out by contract, but all trackwork was done departmentally. The aim has been to reduce all curvature to 1 deg. 30 min. (58 ch. radius) or easier, though up to the present time not all curves have been so reduced. In some cases it was possible to realign by slewing, but in others completely new lengths of track have had to be laid through heavy cuts and over substantial fills on new alignments. The major slews were effected by tractor over transverse distances up to 185 ft. These curve easements will eliminate speed restrictions and facilitate the high-speed running of the streamliners and of other traffic also.

XUM

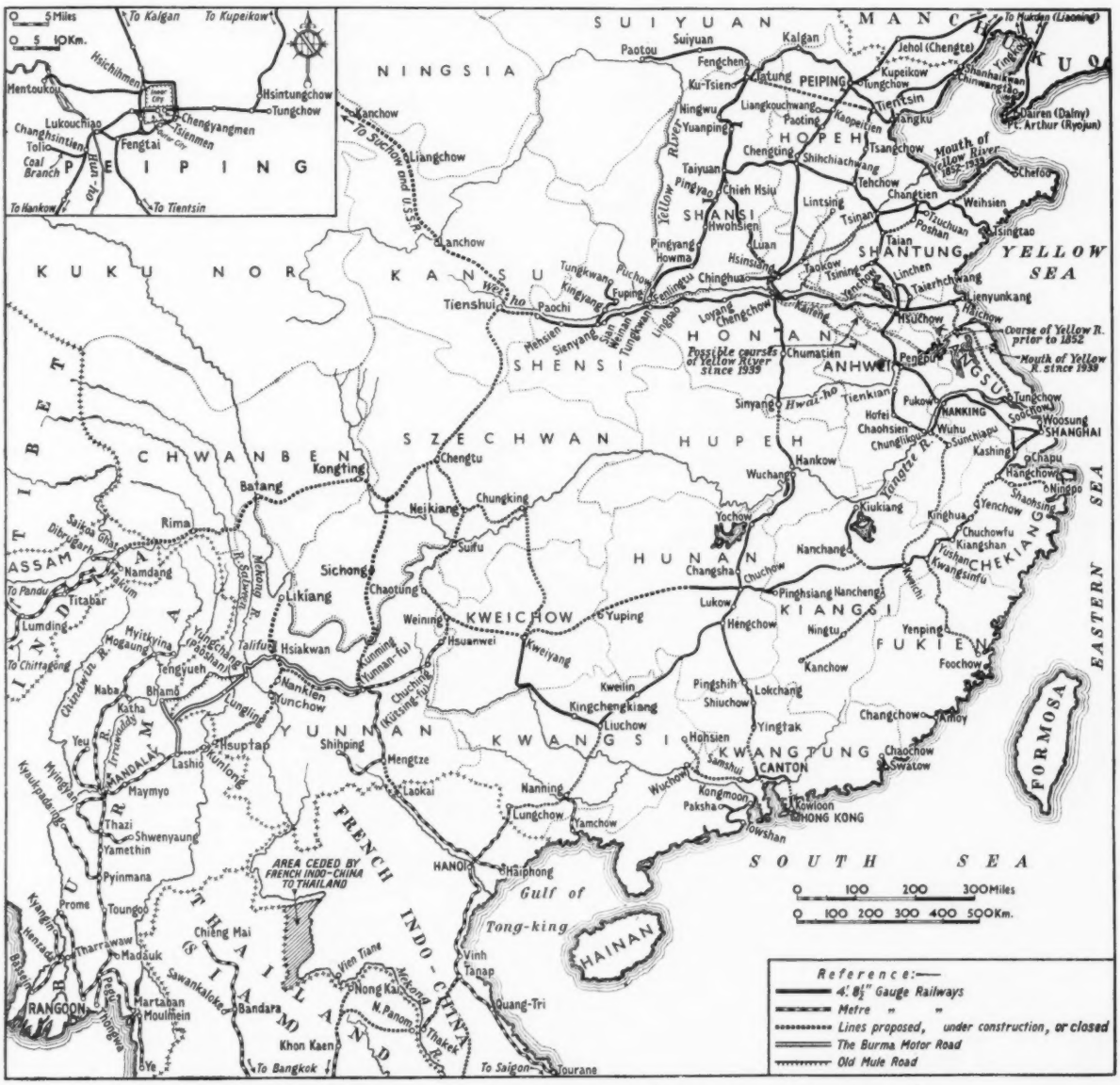
THE PRESENT RAILWAY POSITION IN CHINA

A general review dealing with both Chinese- and Japanese-controlled lines

GOVERNMENT railways in territories controlled by the Chungking Government consist of two separate groups of lines, one north, the other south of the Yangtze river. The first group, with Chengchow* as centre, comprises the Chengchow—Sinyang section, 302 km. (179 miles), part of the Peiping—Hankow line, and the Chengchow—Paochi section (700 km. 440 miles) of the Lung-Hai line, with branches. Traffic on these lines is almost entirely military, and on the latter line trains are run by night only between Chengchow and Tungkwan, as the line, closely following the south bank of the Yellow river, is under fire from Japanese troops holding the north bank.

In the second group, Chuchow junction on the Canton—Hankow line occupies a similar position to that of Chengchow in the north. The length of line under Chinese control varies from time to time as the opposing forces gain or yield ground, and just recently the Japanese claimed to have captured both Changsha and Chuchow, so that for the moment little of this line north of Hengchow remained in Free-Chinese hands. They were, however, quickly driven back northwards again by Chinese forces. East of Chuchow the Nanchang line was, until the loss of Chuchow, open to a point not far from Nanchang, and probably is again now. Nanchang itself is in Japanese hands, and a bus service operates with a wide detour south of Nanchang, to the railhead, east of the town, whence the railway is, so far as is

* Latest messages from China state that Chengchow recently taken by the Japanese, has been recaptured by the Chinese



The railways of China and adjacent countries; showing also the Burma Road

known, still in operation as far east as Kinghua. Southwards the Canton line is open under Free-China auspices to Shaokwan and possibly as far as Yingtak. Westwards from Chuchow about 100 miles of the Hunan-Kweichow Railway are now open, to a point north of Paoking (Shaoyang). The Kwangsi line, from Hengchow to Liuchow is in full operation, and the new section Liuchow—Kweiyang, 400 km. (250 miles), was recently reported as completed, but in view of the very large quantity of material involved this is hardly likely. Construction is now in progress north of Kweiyang towards Chungking. Construction of the Liuchow—Nanning gap in the Kwangsi—French Indo-China line has been abandoned and the already-completed track has been taken up and used for the Kweiyang line.

All these lines are of the standard 4 ft. 8½ in. gauge, and the various sections under construction are progressing as fast as the shortage of rails and fastenings allows; stocks of rails taken up from abandoned sections are getting low. For this reason the construction of the Chungking—Chengtu line has practically ceased.

To the southern group also belong the metre gauge lines centred on Kunming (Yunnanfu). The Burma and the Suifu lines are in operation for about 100 miles and 155 miles respectively out of Kunming. The frontier section of the French Yunnan Railway has been dismantled and the materials used for the other two lines out of Kunming.

Japanese-Controlled Railways

The railways in the eastern part of the country are more or less under Japanese control, those in regular operation far behind the many fronts suffer from frequent interruption by Chinese guerrilla actions, those nearer to the front are in use for military traffic only, or not operated at all. Many sections separating Chinese and Japanese forces have been taken up, notably short sections east and north of Chengchow, the entire Hangchow—Ningpo line, and most of the Hangchow—Kinghua section and the sections round Nanchang.

The Japanese-controlled lines are divided in three distinct parts.

(1) All railways north of the Yellow river—which, due to the Chinese having cut its southern dykes between Chengchow and Kaifeng, altered its course in 1939 and now flows into the Yellow Sea at a point between Haichow and the mouth of the Yangtze river—are operated as one unit by the North China Railway Company. The southernmost station on this system is Pengpu on the Tientsin—Pukow line and the system is separated from the Chinese-controlled railways by the cuts round Chengchow, mentioned above. Its route-mileage is now 3,208 miles (5,173 km.).

(2) The railways in Kiangsu and parts of adjacent provinces south of the Yellow river, with a route-mileage of 704 miles (1,127 km.) are operated by the Central China Railway Company. This system joins the Northern system at Pengpu, and extends southwards to Hangchow, westwards to Wuhu, and includes the Chunglikou—Lohochien line in Anhwei between Yangtze and Yellow rivers.

(3) The other lines are isolated sections, all in vulnerable areas, and those in operation are worked by the Japanese armies. They are a short section of the Peking—Hankow line out of Hankow, the Kiukiang—Nanchang line, and the Wuchang—Changsha section at the northern end of the Canton-Hankow Railway. Also the Kwangtung or southern section appears to be divided up into two lengths. From Canton to Sunkai (25 miles) the line is open to a limited volume of passenger traffic. From Sunkai to Yingtak, a distance of about 55 miles, the rails are said to have been taken up, and from Yingtak the line is believed to be in Free-Chinese hands as stated above.

The Lines Round Canton

Another section of line under Japanese control is the Canton-Samshui Railway running westwards out of Canton. On it the previously-destroyed bridge at Sainam has now been rebuilt and the line is again open throughout between Canton and Samshui. It is, however, available for public traffic—two third-class passenger trains each way daily—only from Canton to Sainam; the Sainam—Samshui section is reserved for military traffic.

Finally, the Chinese section of the Canton-Kowloon Railway is in Japanese-occupied territory. On this line the first 35 miles from Canton to Shektan (Sheklung) are open for public and military traffic, as also is the two-mile branch to Whampoa. There are two trains each way daily from Canton to Shektan and two to Whampoa. The big bridge over the East River near Shektan, destroyed by the retreating Chinese, has not been rebuilt, and the remaining 48 miles of line thence to the Hong Kong frontier are, therefore, out of service.

The North and Central China Railway Companies are both subsidiaries of the South Manchuria Railway Company, and both operate all rail, road, and inland water transport in their areas. The North China Railway Company was established by the North China Development Corporation, a Japanese concern. The company is under a Japanese President, Mr. Kanji Usami, Managing Director of the South Manchuria Railway, seconded by two Vice-Presidents, one Japanese, the other Chinese. The new company has abolished the former separate administrations, and divided the system in six divisions with offices at Peiping, Tientsin, Tsinanfu, Hsuchowfu, Kalgan, and Shihchiachwang. The system is operated at a considerable loss, and no payments of interest or capital redemption to foreign holdings are made, with the exception of payments of interest on Peking—Mukden loans.

Constructions and Gauge Conversions

The unification of the system has led to considerable construction works. The Chengyangmen station, terminus of the Peking-Mukden Railway, now enlarged, is also used by the Peking—Hankow line; at Tsinanfu the Tsingtao line is brought into the main line station on the Tientsin—Pukow line; the Taiyuan—Shihchiachwang and the Tatung—Fenlingtu lines have been converted from metre gauge to standard gauge, and all lines are now of 4 ft. 8½ in. gauge. The system has several seaports and Tsingtao, which is already well equipped, has been scheduled as principal port, with Tientsin-Tangku, Chinwangtao, and Lienyungkang as less important harbours. New railway construction has been planned to develop routes to these ports, those to Tsingtao having priority. The Shihchiachwang—Tehchow line is—as previously reported in our Overseas columns—an important new link, and should already be benefiting Tsingtao traffic. The Taiyuan—Luan line is to become another important link and with its extension to Hsinsiang junction, a direct rail route will be provided from Taiyuan to the port of Lienyunkang. A third link planned is a direct line from Tatung to Tientsin, avoiding Peking. These lines have to wait until the Tsingtao traffic has been properly developed.

Tientsin East station is being extended, and several quays, sidings, warehouses, and quayside equipment are under construction or about to be brought into being. At Tangku three new landing stages have been built, the Peking—Chinwangtao line is being doubled throughout its entire length. Special attention is being paid to the coal traffic, and wherever possible coal mines are being provided with additional sidings, and traffic facilities to the ports. Coal traffic has preference on all lines, and so have Japanese goods generally. Chinese goods can only be sent through Japanese forwarding agents, who collect, transport, and deliver in full wagon loads only.

The Central China Railway is a smaller concern than its northern counterpart. The President is another S.M.R. nominee, Mr. M. Den. The system is sub-divided into two divisions, with headquarters at Pukow and Hangchow. No important development works have been carried out so far, with the exception of the provision of new train ferry boats for the Nanking—Pukow ferry.

American Electric Line.—A lease of the low-voltage d.c. Camden—Millville line of the Pennsylvania and Reading Railroads' Seashore route is envisaged in proposals now being made for the construction of an electric railway to connect Philadelphia with towns in the southern part of New Jersey, which would make use of the rapid-transit lines of the Philadelphia Transportation Company and the Delaware River Bridge authority.

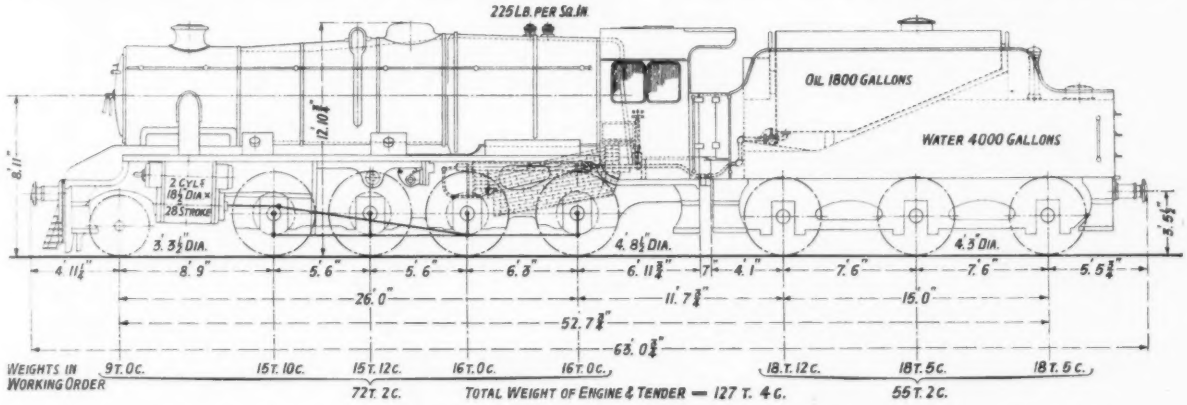
BRITISH-BUILT LOCOMOTIVES FOR THE MIDDLE EAST

Standard Ministry of Supply 2-8-0 locomotives converted from coal to oil burning

(*See illustrations on pages* 470 *and* 471)

BY the courtesy of the Ministry of Supply, particulars are given below of the 2-8-0 locomotives at present being built for service in the Middle East by the North British Locomotive Co. Ltd., and Beyer, Peacock & Co. Ltd., previously described in our January 19, 1940, issue, pages 83-85, modified by the provision of oil-burning equipment to suit eastern railway conditions. In addition, certain existing locomotives of the same type are being converted from coal to oil burning by the L.M.S.R., G.W.R., and S.R. Companies.

In converting these coal-fired engines to oil burning, consideration was given to the quick conversion back again to coal-firing should occasion arise. With this in view the usual ashpan has been retained, but a false bottom to form a firepan with air apertures has been provided; the ashpan itself retains all damper-doors, front, middle and back, as in a standard locomotive. All the stays in the firebox were previously nutted, but these have been removed and the stays riveted over to avoid any burning by flame blast.



Dimensioned outline drawing of Ministry of Supply 2-8-0 locomotive converted from coal to oil burning

An oil tank of 1,800-gal. capacity, arranged on the tender, is shaped to fit into the normal coal bunker, the upper portion is rectangular with a flat top. A filling hole is provided with a sieve of generous proportions to ensure rapid re-fuelling. To maintain fluidity of the oil, a steam-heating coil is fitted immediately above the oil outlet, which is situated at the front end of the tank. A dipstick graduated in litres is provided, and a sludge cock at the lowest part of the tank enables accumulated sludge to be drained off. The supply of oil from the tender is led by piping alongside the firebox underneath the right-hand side of the engine footplating to the bottom of the firebox at the front end; between the engine and tender the piping is flexible. A further heater, in the form of a steam jacket, is provided in this pipe, and immediately beyond is a strainer which consists of a wire gauze frame readily removable for inspection and cleaning purposes. Next is the oil-feed plug control cock, the lever of which is coupled by a connecting rod to the lever of the graduated control cock situated on a column on the right hand or fireman's side of the cab.

The oil burner, which is of the flat two-compartment type, is positioned at the front end of the firebox underneath the foundation ring and through the firepan front plate. The oil compartment of the burner is above the steam compartment; the outlet orifice for the former is $\frac{1}{2}$ in. by 2 in. wide, and the orifice for the latter approx. $\frac{1}{32}$ in. by 2 in. wide. An auxiliary steam manifold, from which all steam controls for manipulating the oil-burning system are taken, is shown located in the cab. The supply of this can be taken either from a separate steam supply or from the engine boiler.

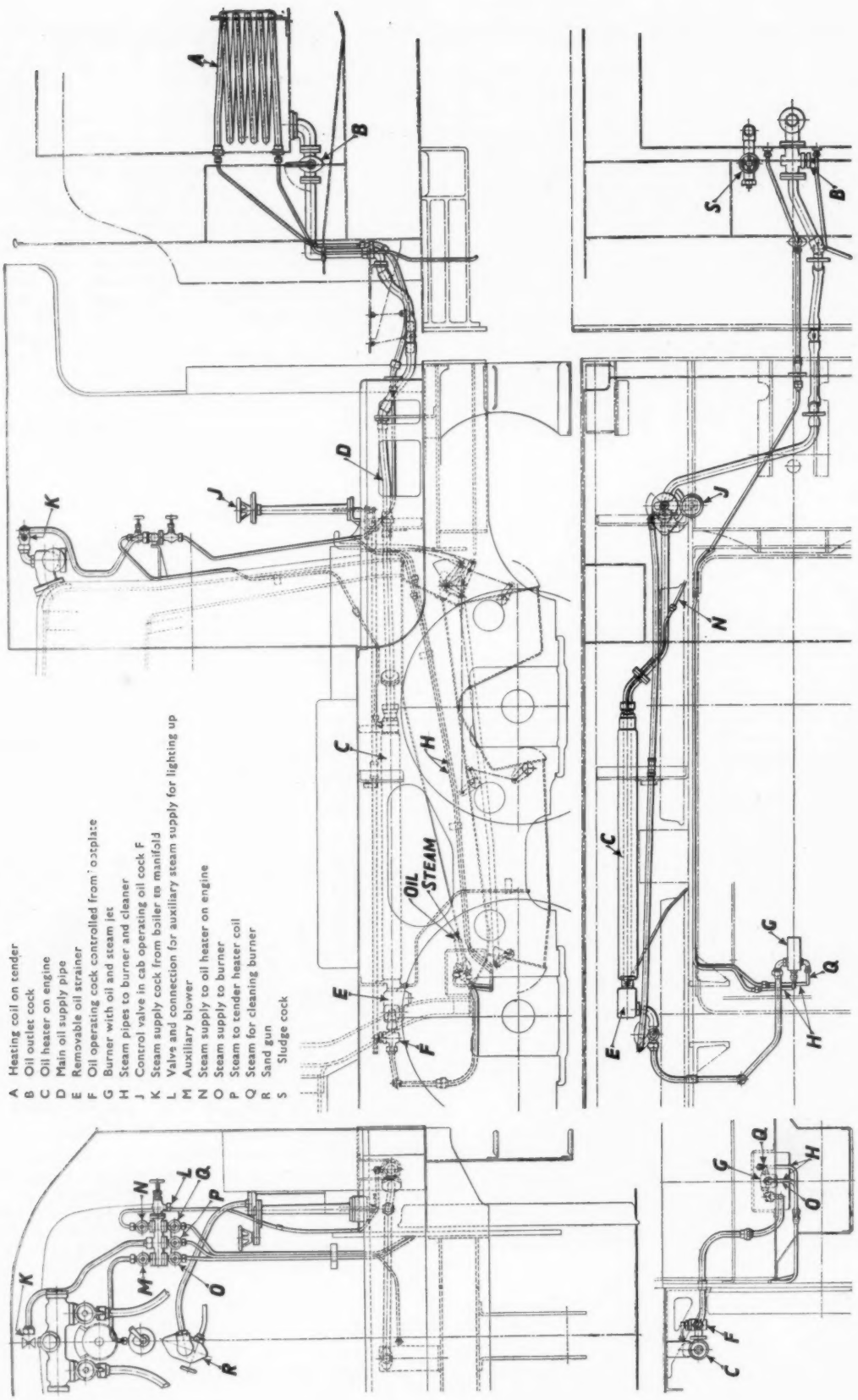
The firepan is heavily lined with firebrick round all sides for some 2 ft. up; the bottom is also firebrick lined and provided with three twin air apertures, two at the front close behind the burner mouth, two in the middle, and two at the back. Below this is the pan bottom casing which has front, middle and back damper doors all operated from the footplate for correct control of the air supply. A special firedoor, heavily lined, is provided and so arranged that it can be shut by two nuts when the oil burner is in use; there is a peep hole with a movable flap in the door for observation purposes.

The locomotives are equipped with three separate braking systems, Westinghouse, automatic vacuum (on train) and steam (on the engine). They are fitted with fenders at the front end, and have masked headlights. The dual arrangement of pipe connections for the Westinghouse brake seen in the front-end view of the locomotive was necessary to provide for attaching the locomotive to rolling stock having special types of couplings, differing from that fitted on the engine itself.

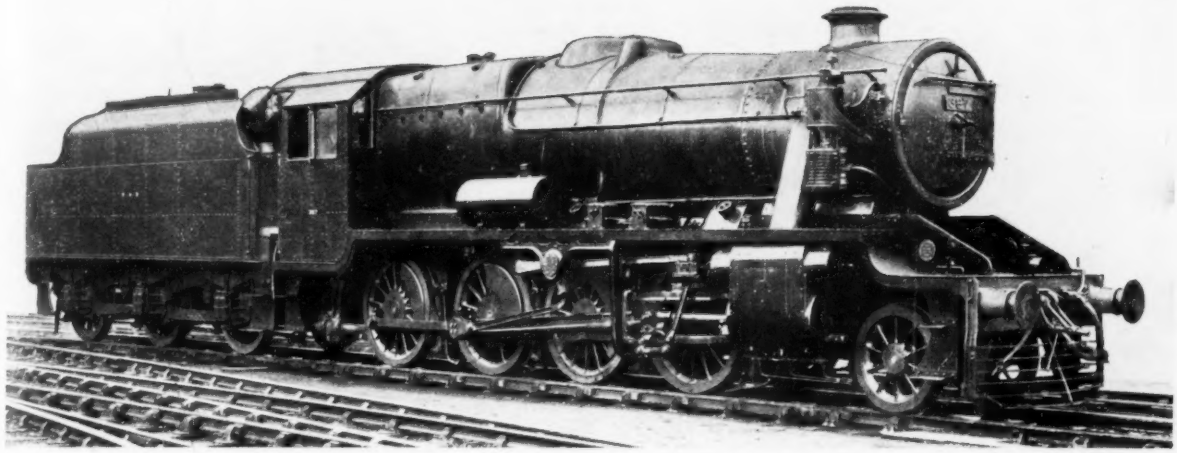
The locomotives are provided with sand guns for tube cleaning by the engine crew while in service. These engines will be operating in countries where water treatment plants are installed, and are provided with continuous blowdown equipment to avoid foaming with resultant priming. For protection of the engine crews against the tropical sun, a double roof with air spacing is being provided, and will be fitted on arrival of the engines at their destinations.

ROOFING FELTS.—A war emergency British Standard Specification, B.S. 989, for bituminous roofing felts and for roofing has just been issued. It has been prepared at the request of the Ministry of Works & Buildings. The specification comprises three parts: Part 1 is a classification of felts and represents the decision which was arrived at by the Director of Roofing of the Ministry and the manufacturers as to the range of roofing felts which should be manufactured at present. Part 2 is a detailed specification of the felts covered by the classification, and Part 3 is a specification for the laying of the felts. Copies may be obtained from the British Standards Institution, 28, Victoria Street, S.W.1. Price 2s. 3d. post free.

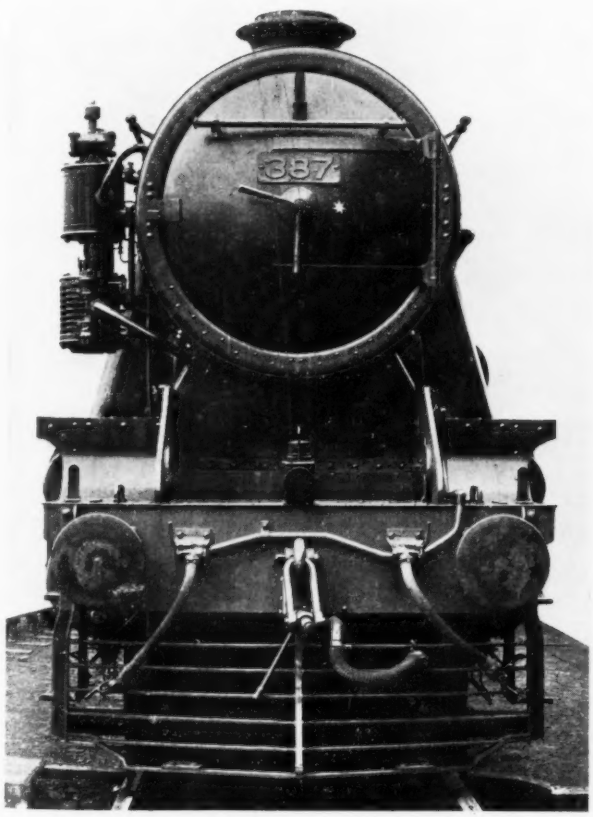
XUM


A Heating coil on tender
B Oil outlet cock
C Oil heater on engine
D Main oil supply pipe
E Removable oil strainer
F Oil operating cock controlled from footplate
G Burner with oil and steam jet
H Steam pipes to burner and cleaner
J Control valve in cab operating oil cock F
K Steam supply cock from boiler to manifold
L Valve and connection for auxiliary steam supply for lighting up
M Auxiliary blower
N Steam supply to oil heater on engine
O Steam supply to burner
P Steam to tender heater coil
Q Steam for cleaning burner
R Sand gun
S Sludge cock
OIL
STEAM

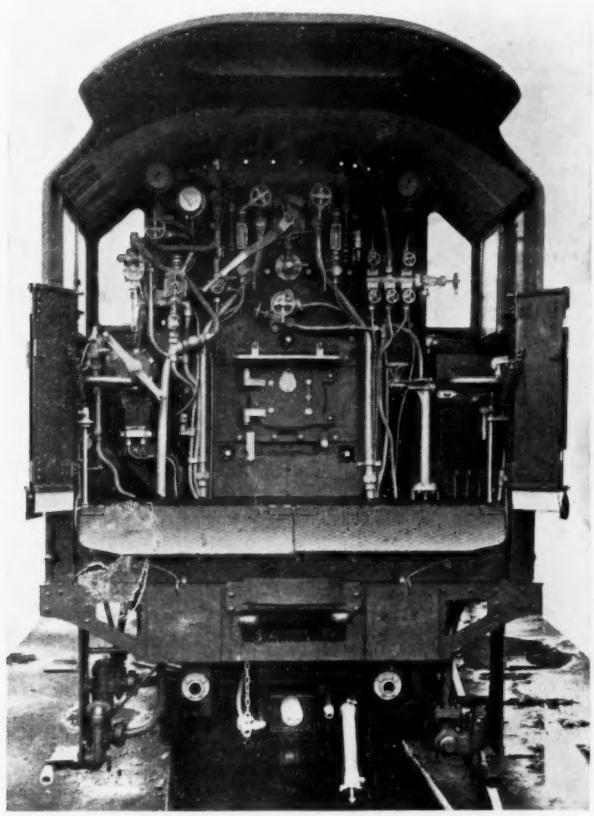
General arrangement of piping and fittings on oil-burning locomotives for the Middle East



Standard Ministry of Supply 2-8-0 locomotives fitted with oil-burning apparatus



Front end of locomotive showing fender and Westinghouse brake fittings



Interior of cab as arranged for oil-burning conditions

Oil-Burning Locomotives for the Middle East

(*See article on page* 469)

IMPORTANT SWISS RAILWAY IMPROVEMENT AT BERNE

The eastern approach to the main station in the Swiss capital has been re-aligned and widened, involving a new reinforced concrete arch bridge over the River Aare and other extensive engineering works

THE four-track deviation between Berne station and the junction of the Olten and Thoune routes at Wilerfeld, which has been briefly referred to on several occasions in THE RAILWAY GAZETTE, was officially inaugurated on September 7 last, as recorded on page 343 in our issue of October 3. This is one of the major works carried out by the Swiss Federal Railways in recent years, and it is a noteworthy feat to have completed it almost to schedule under war conditions.

The scheme represents the second stage in a general programme of improvements at Berne, where traffic had grown out of all proportion to the capacity of the existing accommodation. Situated on a curve, the main passenger station had five platforms (one of them single-faced), most of them too short for the ever-lengthening expresses on the main routes, and at the west end in particular trains extending beyond the platform ends prevented movements between adjacent tracks and the carriage sidings and locomotive sheds. The first stage of the project, therefore, concerned the western approach, where in order to re-arrange the main lines (Fribourg and Neuchâtel directions) and extend the carriage sidings, it was decided to remove the goods station from the Laupenstrasse to the vicinity of the goods yards at Weiermannshaus. This work was completed in 1935, when the extensive and modern goods station was opened, and movements at this end were appreciably improved.

By far the greater part of the traffic, however, enters Berne from the north-east, namely, from (*a*) the Olten direction (Zurich and Basle) and from Bienne (Chaux-de-Fonds, Delle, and Basle), the junction of these two lines being at Zollikofen, 7·4 km. distant; and (*b*) from Thoune, the Loetschberg line, and Interlaken, and from Lucerne, the latter route joining the Thoune line at Gümligen, 8·2 km. distant. The Olten—Bienne and Thoune—Lucerne lines have their junction at Wilerfeld, on the outskirts of the city, where there are also fairly extensive goods sidings, and from here to Berne station the traffic of all four routes had to run over a double-track line. To make matters worse, for several years past, it has been necessary on account of the heavier locomotives to restrict the use of the Aare bridge to one train at a time, the last half-mile into Berne station being thus, in effect, a single line. The Berne—Wilerfeld section is the busiest on the Federal system, traffic having risen from 40 trains in 1860 and 97 in 1900 to over 200 in 1940; a record figure of 291 trains, including specials, was attained on April 20, 1941. It had, therefore, become imperative to undertake extensive improvements.

An agreement between the City of Berne and the Federal Railways was signed in July, 1932, and provided for a contribution by the city of a sum of fr. 1,500,000 towards the additional expenditure involved by the construction of a deviation, and in payment for the land released by abandonment of the old line. Owing to the prevailing financial stringency, however, it was not possible to proceed immediately with the scheme, and it became ultimately necessary for subsidies to be granted by the Confederation, the Canton, and the City of Berne from funds allotted to the reduction of unemployment, to a total amount of fr. 4,330,000, the estimated total expenditure on the work being fr. 15,700,000; the actual cost has worked out at about fr. 17,000,000. The credit was finally approved by the Federal Railways in September, 1935, and preliminary work began in the following spring. As the project was to provide as much employment as possible, it was arranged to spread the work over several years rather than carry it out in the shortest possible time, and no use was made of mechanical excavators for the removal of some 40,000 cu. m. from the Wilerfeld cutting.

The work was divided into six contracts and entrusted to consortiums formed by several Berne firms and also Locher & Cie, and A.G. Hatt-Haller, of Zurich. Dr. Eggenberger, Chief Engineer, and Dr. Bühler, Chief Bridge Engineer, of the Federal Railways, were chiefly responsible for the planning and execution of the undertaking. With a total length of 1·55 km., the deviation entailed, from east to west (1) a 450-m. cutting, (2) a 400-m. reinforced concrete viaduct, (3) the Aare bridge and approaches (330 m.), also in reinforced concrete, and (4) widening of the approach to Berne station. From Wilerfeld the line falls at 1 in 91 for some distance, then rises at 1 in 100 to the Aare bridge, which is level, and after rising at 1 in 125 to pass over a street, has a short drop to the level of Berne station. The minimum curve radius is 450 m., or about 22½ ch. A widening of the bottleneck between the Grosse Schanze Hill (immediately north of the main station) and the Post Office (on the opposite side of the line), entailed alterations to buildings, the removal of a portion of the hill, and the construction of a high concrete retaining wall further back than the former stone wall. When the third stage is taken in hand, it

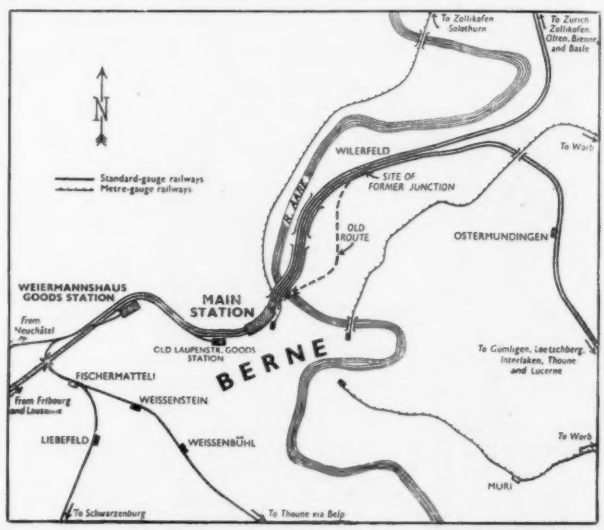


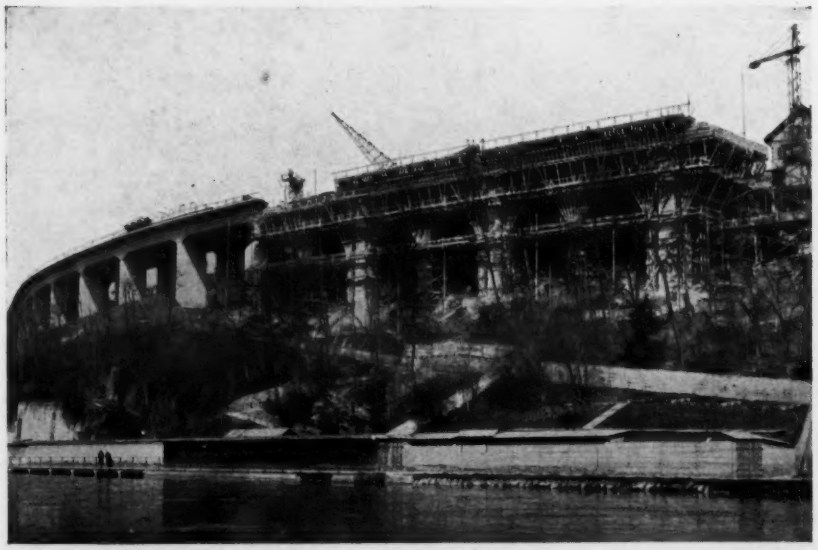
Diagram of railways at Berne, showing Berne-Wilerfeld deviation

will be necessary to remove still more of the hill and build yet another wall further back, in order to make room for additional tracks and platforms. Opportunity was taken to excavate a large air-raid shelter under the hill, accommodating up to 1,000 persons, and with access both from the station and the Federal Railways' headquarters building on the hill. Of the two steel footbridges spanning the tracks between the station and the Aare bridge, one was lengthened and the other replaced by a new bridge, in both cases with additional space to serve as signal bridges.

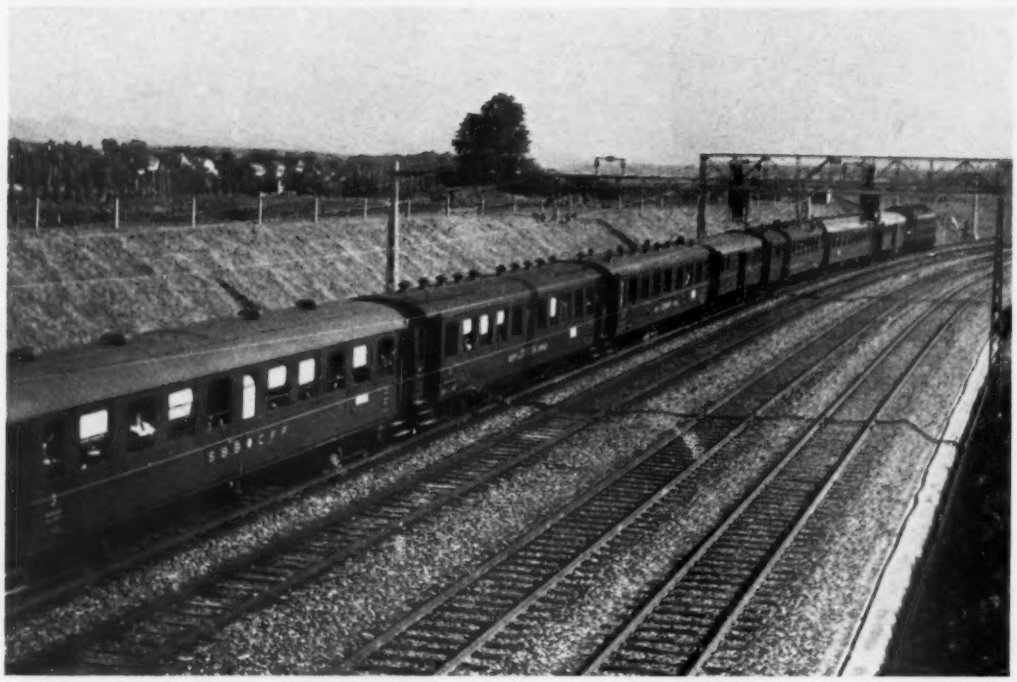
Signalling Remodelled

Signalling in Berne was formerly controlled from a central room in the station building on platform 1, with one manual box at the west end and another in the fork between the old Aare bridge approach and the shunting and express goods lines at the east end. A new box, with 78 levers controlling 92 routes, has been provided at the east end of platform 1,

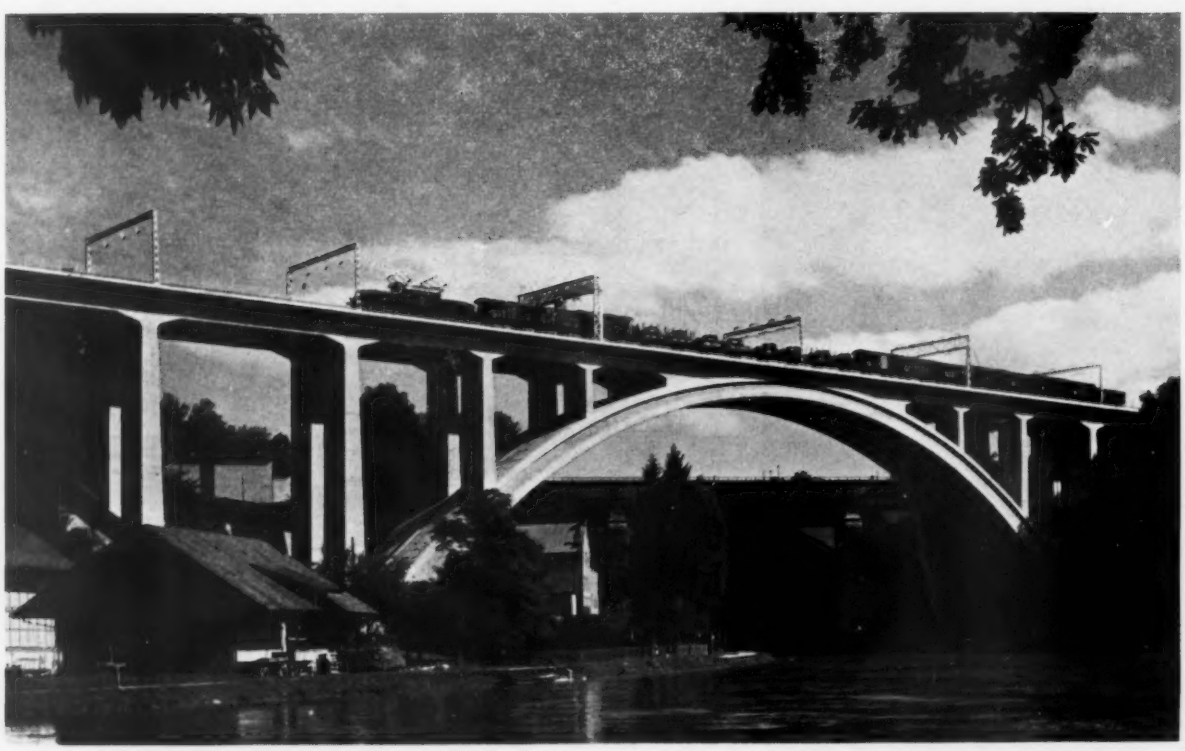
Concrete viaduct between the Aare bridge and Wilerfeld carrying the new 4-track approach to Berne station



Left: Viaduct under construction over the Talwegmulde; and, right: General view of the new reinforced concrete Aare bridge under construction, with the old railway bridge beyond. Berne cathedral is seen in the background



Cutting near Wilerfeld, looking north, showing colour-light signals



The new Aare bridge as completed. View looking south, showing the old railway bridge in the background and road bridge behind it

and this is also the controlling post for the whole station area, replacing the former central office. All signals at this end of the station are of the Signum colour-light type, with route indicators fitted on one of the overbridges and starting signals on the other. The whole of the deviation line to beyond Wilerfeld on both routes is similarly equipped, the box at Wilerfeld—which, incidentally, controls movements of the many goods trains that have to reverse here—having been practically rebuilt. Current for signals and point motors is supplied from the traction circuit or, in case of failure, is automatically taken from the town supply.

The work of connecting the four tracks of the new line with the station layout, improving the latter, lengthening some of the platforms, altering the overhead equipment and switching over from the old signalling to the new, involved very careful planning to enable traffic to be handled with as few delays as possible. Actually, normal traffic was continuously maintained, and no serious accident of any kind occurred during the many weeks of extensive track work under difficult conditions. Altogether 27 new sets of points and 13 new double-slip crossings were included in the layout, and the work was carried out in ten main stages, the most important alterations being made at night. At the Wilerfeld end all the tracks had to be lowered for some distance in preparation for the successive connecting-up of the deviation tracks with those of the two main routes, and here again the work was done in numerous stages with no interference to traffic beyond the inevitable speed restriction for all trains at this point, and for a short time the routing of Zurich line trains through the goods reception sidings.

The westerly double track—that used by Zurich and Bienne trains—was first brought into use, the northbound track on the night of July 21-22, and the southbound track during the following night. On August 31, all four tracks were in use for the first time. Meanwhile all overhead equipment on the old line had been removed, and by the end of September the demolition of the smaller bridges at the Berne end was completed and work on the breaking-up of the old Aare bridge begun. A new avenue will be laid out on the site of the old line in the suburbs beyond the bridge.

Further Improvements

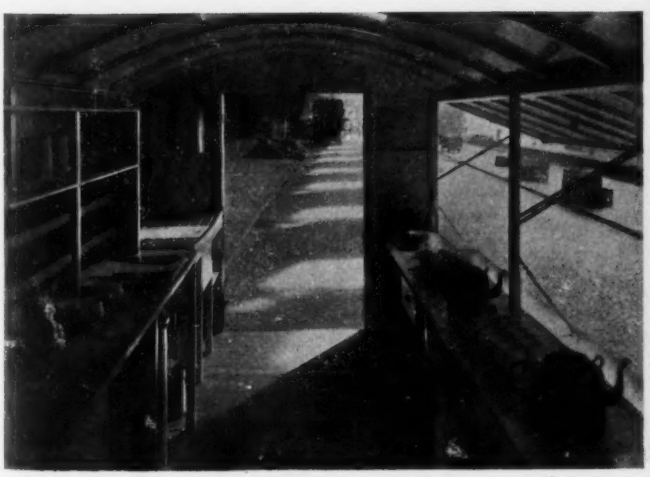
As previously indicated, the next stage of the Berne improvements will be the extension of platforms and tracks in the main station, and the fourth and last will comprise the construction of a new station building, the present one having been but little altered since 1890. It will be necessary for adjacent land to be acquired from the city, as the area now occupied is quite inadequate. The Berne-Zollikofen-Solothurn Railway, a metre-gauge line entering the city over one of the municipal tram routes and having its terminus on the station square, is to have an underground approach and terminus. These further projects are, however, in abeyance pending more favourable times.

G.W.R. Mobile Canteens

Left: Exterior view of the mobile canteen for use of G.W.R. employees, which was inspected at Paddington station by Sir Alan Anderson, Chairman, Railway Executive Committee, and Controller of Railways, Ministry of War Transport

(*See page* 484)

Below, left: The interior of the canteen, and, right, the canteen in service

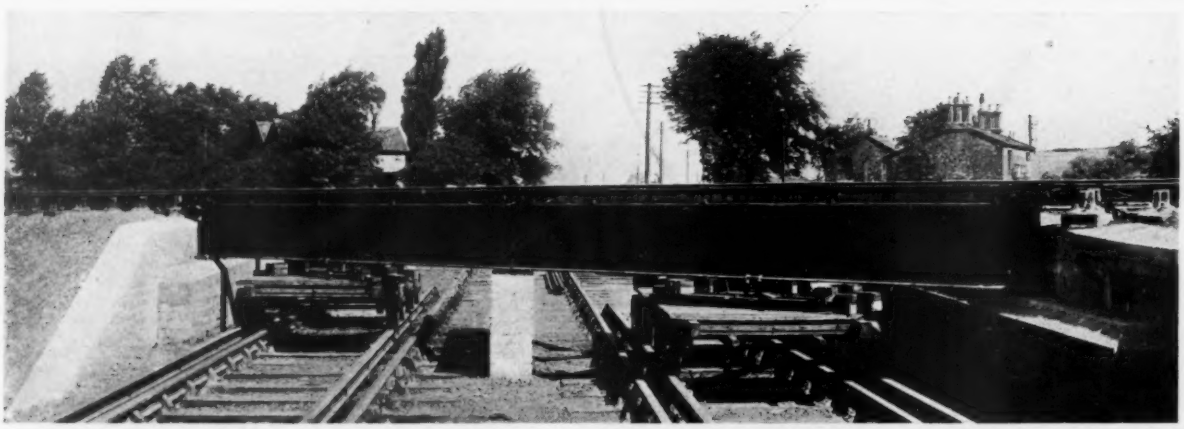


British Railways and the War—90

Above: Movable bridge put aside in run-offs

Right : Movable bridge partly removed

Below : Movable bridge in position to carry single branch line over double avoiding line



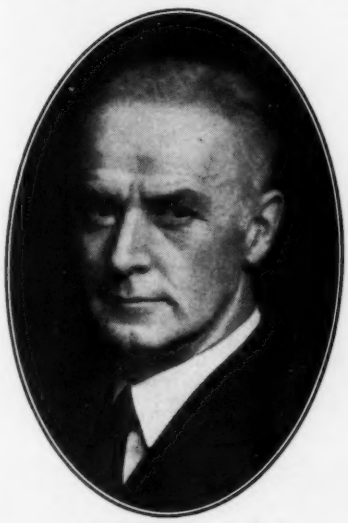
A BOGIE BRIDGE FOR EMERGENCY USE

(*See page* 480)

RAILWAY NEWS SECTION

PERSONAL

Mr. D. G. Hoppins, Traffic & Marine Agent, Weymouth, Great Western Railway, who, as recorded in our October 10 issue, has been appointed Docks Manager, Cardiff & Penarth, began his career with that railway at Plymouth Docks in 1902. After gaining varied experience in different sections of the Marine and Docks Department, he became head of the Cargo Department in 1912. Ten years later he was transferred to the Goods, but returned to the Docks Department as Chief Clerk in 1924. While at Plymouth he was engaged in the handling of the ocean passenger and mail traffic landed from some of the largest liners in the world. At the end of 1932, Mr. Hoppins was transferred to Newport Docks as Assistant Docks Manager, and in January, 1936, was appointed Traffic & Marine Agent, Weymouth, where he was responsible for the running of the Channel Islands service. He has been attached to the Dock Manager's Office at Cardiff since November, 1940.



Mr. D. G. Hoppins

Appointed Docks Manager, Cardiff & Penarth, G.W.R.

Mr. L. E. Ford, M.Inst.T., Principal Assistant to the Chief Docks Manager, Cardiff, Great Western Railway, has been appointed Assistant Chief Docks Manager, as recorded in our October 10 issue. Mr. Ford joined the Divisional Superintendent's Office at Cardiff, Great Western Railway, in 1912. In 1914 he enlisted in the Welsh Regiment, but in the next year accepted a Commission in the 2nd Battalion, Monmouthshire Regiment. From 1919 to 1921 Mr. Ford held various posts in the Traffic Department, London Division, in the Office of the Superintendent of the Line, in the Office of the District Goods Manager, Birmingham, and at stations in that district. He was also included in the first quota of "special trainees" introduced in 1921. In 1923 he was appointed Personal Clerk to Sir Felix Pole (General Manager), and was transferred to the Docks Department that December, when he was attached to the Chief Docks Manager's Office in charge of the New Works Section. Mr. Ford was promoted to be Outdoor Cargo Assistant to the Docks Manager, Cardiff, in 1926, and Assistant in Charge, Penarth Docks, two years later. He went to Swansea in 1929 as Assistant Docks Manager. In 1933 he went to Port Talbot as Docks Manager, and in June, 1938, became Docks Manager, Cardiff and Penarth Docks. In August, 1939, he was appointed Principal Assistant to the Chief Docks Manager.

Mr. L. E. Ford

Appointed Assistant Chief Docks Manager, Cardiff, G.W.R.

Mr. T. T. Mead, who has been Acting Divisional Engineer, Newport, Great Western Railway, since January, 1940, has (as recorded in our October 10 issue) been confirmed in this position. Mr. Mead was educated at Taunton School and served a pupilage in the Divisional Engineer's Office at Paddington, and was subsequently attached to the staff of the London Divisional Engineer. He remained there until 1910, when he was transferred to the Taunton Division. During the war of 1914-1919 Mr. Mead enlisted in the Royal Engineers and served with the 279th (Railway) Company in France. After demobilisation in December, 1919, with the rank of Lieutenant, Mr. Mead returned to the London Divisional Engineer's Office. In March, 1925, he was appointed Resident Engineer for the reconstruction of Bristol (Temple Meads) goods station. Two years later he became Assistant Divisional Engineer, Central Wales Division, and in September, 1932, was made Assistant Divisional Engineer, Cardiff Valleys Division. In January, 1935, Mr. Mead was transferred in a similar capacity to Newport, and in January, 1940, was appointed Acting Divisional Engineer during Lt.-Colonel E. C. Cookson's (the Divisional Engineer) absence with the Forces.

Mr. T. T. Mead

Appointed Divisional Engineer, Newport, G.W.R.

Sir Francis Floud has been appointed Chairman of the re-constituted Road Haulage Central Wages Board.

Mr. S. C. Britton, M.A., of the Metallurgical Section at Derby, Research Department, L.M.S.R., has been awarded a Telford Premium by the Institution of Civil Engineers for his paper on "Some Corrosion Tests in a Railway Tunnel."

We regret to record the death on October 18 of Sir Ernest Jackson, C.I.E., Agent of the Bombay, Baroda & Central India Railway from 1925 to 1932.

We regret to record the death on October 18, at the age of 74, of Alderman Richard R. Fairbairn, J.P., Mayor of Worcester, and Chairman of the Worcester Corporation Public Traffic Committee. Mr. Fairbairn was born in London in 1867 and is said to have sold newspapers as a boy at Ludgate Hill station, London, Chatham & Dover Railway, and to have been associated with the *St. James's Gazette* shortly after it was established in 1880. He then went to Canada and was educated at Ryerson Public Schools, Toronto. On returning to London he received a commercial training in the City and held various posts in friendly societies and other public organisations. In January, 1888, he joined the staff of the West Metropolitan Tramways Company (afterwards merged into the London United Tramways Limited) and was appointed Manager in 1890, at the age of 22. He held this position until 1894, when he went to take charge of the Worcester Tramways, and began a connection with that city which lasted until his death. Mr. Fairbairn became a member of the Worcester City Council in 1899, when he was elected unopposed. When the British Electric Traction Co. Ltd. acquired the undertaking of the Birmingham General Omnibus Company in September, 1899, Mr. Fairbairn was chosen to reorganise the business, and

Mr. A. McIntosh

Appointed District Engineer, Inverness, L.M.S.R.

Mr. A. E. H. Brown

Appointed District Superintendent, Newcastle, L.N.E.R.

The late Mr. A. W. Wellsted,

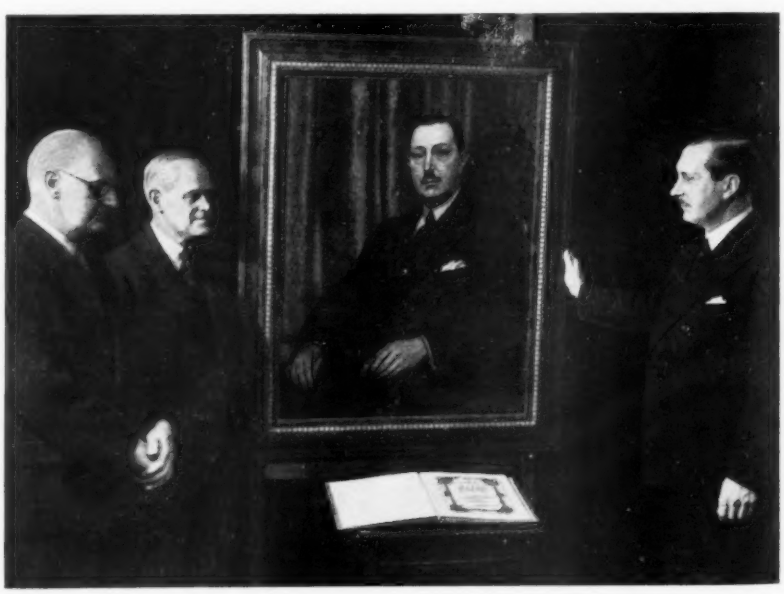
Commercial Manager, New Zealand Railways, 1934-1940

held the position of Manager until its amalgamation with the Birmingham & Midland Tramways. At the end of 1901 he returned to Worcester, and was succeeded as Manager at Birmingham by Mr. O. Cecil Power. Worcester Corporation purchased the undertaking of the Worcester Electric Traction Co. Ltd. and closed the tramways on May 31, 1928, replacing them with motorbus services worked under agreement by the Birmingham & Midland Motor Omnibus Co. Ltd. Alderman Fairbairn became Chairman of the Worcester Corporation Public Traffic Committee. As a Liberal he fought every Parliamentary election for Worcester from 1910, but was unsuccessful, except in 1922, when he held the seat for nine months. He received the freedom of the city of Worcester only a month before his death.

Mr. A. McIntosh, District Engineer, Inverness, L.M.S.R., whose appointment we recorded in our August 29 issue, joined the service of the Caledonian Railway in 1912 in the Western District Engineer's office at Glasgow. Mr. McIntosh enlisted in the Royal Engineers in 1915 and after his demobilisation in 1919, with the rank of Captain, he returned to railway service. In 1930 he was transferred to the Divisional Engineer's office (Maintenance Section), and in 1936 was appointed Assistant in Maintenance of Way & Works. On August 1, 1941, Mr. McIntosh became District Engineer, Inverness.

Mr. A. E. H. Brown, District Superintendent, Sunderland, London & North Eastern Railway, who, as recorded in our October 10 issue, has been appointed in a similar capacity at Newcastle, was educated at Oundle School. He entered the service of the Great Eastern Railway in the department of the Superintendent of Operations after being demobilised from the Army in 1919. Two years later he was transferred to the Civil Engineer's department, and in 1923 was detailed to the Divisional General Manager's office to assist Mr. F. V. Russell in the preparation of various schemes for the electrification of suburban and main lines. Mr. Brown was appointed Assistant Yardmaster at Ferme Park in 1931, Assistant Stationmaster, King's Cross, in 1933, and Deputy Chief Controller, Central Control (Southern Area), in 1935. In 1937 he went to King's Cross as Assistant to the District Superintendent, and was appointed full Assistant in 1939. He became District Superintendent, Sunderland, in April, 1940. He served on Mr. Frank Pick's London Evacuation Committee, and was from September, 1939, until April, 1940, District Air Raids Precautions Officer for the King's Cross District.

We regret to record the death on June 25 of Mr. Arthur W. Wellsted, Commercial Manager, New Zealand Railways. Mr. Wellsted joined the railway service at Dunedin in July, 1900, and was stationed in that district throughout the first 23 years of his railway career, except during the years 1915-1918 when he was overseas with the New Zealand Expeditionary Force in which he attained the rank of Captain, and was mentioned in despatches. For a time during his stay in England Mr. Wellsted was attached to



Mr. G. H. Nelson, Chairman & Managing Director, the English Electric Co. Ltd., has recently been presented with his portrait in oils, as a gift from the commercial staff of the company, both home and abroad. The presentation was made at an informal lunch at which Mr. Harold Knight, R.A., the artist, was also a guest. Mr. Nelson is shown on the right, and Mr. Harold Knight with Mr. G. F. Gills, who made the presentation, on the left

the London & North Western Railway Company and gained valuable experience in United Kingdom transport practice during this period of service. In July, 1924, he transferred to the District Traffic Manager's Office, Ohakune, and was then appointed Business Agent at head office early in 1925; shortly afterwards he occupied a similar position at Wanganui. He went to Auckland in 1926, was promoted to Senior Business Agent in February, 1932, and, six months later, to the position of Chief Clerk to the Commercial Manager at Head Office. He was appointed Commercial Manager in January, 1934, a position which he held for seven years to his retirement in December last.

We regret to record the death on May 8 of Mr. Edgar Thomas Ling Spidy, Superintendent of Workshops, New Zealand Government Railways, and, since the outbreak of war, Controller of Munitions in the Dominion. Mr. Spidy was born in 1887 at Brighton, Sussex, and was educated first at Petone, a suburb of Wellington, New Zealand, and later, after returning to England, at York Place, Brighton, where he commenced his mechanical training, serving his apprenticeship as fitter at the London Brighton & South Coast Railway workshops there. In 1909 he went to Canada, where he was associated with Mr. H. L. Gantt in the reorganisation of schedule and piecework methods. He was engaged by the Canadian Pacific Railway to introduce production methods at its Toronto and Winnipeg shops, eventually becoming Shop Engineer in charge of machinery, maintenance, and methods. In 1916 as a special wartime loan by the C.P.R. he was transferred to the Manitoba University, as lecturer on machine and power plant design. Later he became Production Engineer of the Canadian Ingersoll Rand Company, manufacturers of pneumatic tools and air compressors, but returned in 1919 to the C.P.R. Angus shops as Production Engineer in charge of production, piecework, and statistical work. In 1921 he became Assistant Superintendent of the Dominion Company's works in Canada, a firm specialising in the manufacture of papermaking machinery and large hydraulic turbines. In 1924 he went to New Zealand and joined the service of the Government Railways as Production Engineer attached to the office of the Chief Engineer at Wellington; a few months later he was appointed Superintendent of the Railway Workshops, the first appointment of its kind to be made in the Dominion. There he introduced the production methods for which his experience had so well fitted him, with special attention to the scheduling and routing of work through all its stages. One of his innovations at the railway shops was an entire revision of the apprenticeship system, by which youths could carry on part of their schooling in the department's time. Soon after the outbreak of war, Mr. Spidy undertook the direction of munitions production, a work in which he became greatly absorbed and which he thoroughly organised.

Lord Ashfield has agreed to continue for a further period as President of the Advertising Association.

Mr. W. G. Brown, Passenger Traffic Manager, Chicago, Baltimore & Ohio Railroad, has retired after 57 years of service.

At the meeting of the Buenos Ayres Great Southern Railway Co. Ltd. held in London on October 29 (reported at page 485), Mr. J. M. Eddy referred to the fact that at the last meeting Sir Follett Holt had presided and had asked to be released from the heavy work entailed by the joint Chairmanships of the Buenos Ayres Great Southern and the Buenos Ayres Western Railways. The directors had hoped that Sir Follett would have been able to assist them as a member of the board, but on reflection he had decided to retire in order to give his successor a free hand. Fortunately, as Chairman of the Entre Rios and Argentine North Eastern Railways and an active member of the British-Argentine Railway Committee, his counsel was still at their service.

Sir Herbert H. Couzens has been elected President of the Brazilian Traction Company in succession to the late Mr. Miller Lash, whose death we recorded in our October 17 issue.

The Ministry of War Transport announces the appointment of Lt.-Colonel Charles G. Vickers, V.C., as a part time member of the London Passenger Transport Board. Colonel Vickers will hold office for seven years.

Mr. J. F. Whittington, General Passenger Agent, New York City, Baltimore & Ohio Railroad, has been appointed Assistant Passenger Traffic Manager.

The death took place on August 29 of Mr. Francis Henry Bagley, Superintendent, Telegraph & Signals, Seaboard Air Line.

Mr. LeRoy V. Porter, Comptroller, New York Central System, has been appointed Vice-President & Comptroller, in succession to Mr. W. C. Wishart, who has retired.

We regret to record the death on September 3 of Mr. Hugh A. Toland, General Auditor, Union Pacific Railroad.

We regret to record the death, at Tunbridge Wells, on October 22, at the age of 74, of Mr. George Henry Sykes, elder surviving son of the late Mr. W. R. Sykes, the well-known signal engineer and inventor. Mr. G. H. Sykes was associated with his father in business and was for a long time Works Manager to the W. R. Sykes Interlocking Signal Co. Ltd. He had lived for many years in retirement, owing to ill health. His only son, Mr. G. Hughenden Sykes, was in the Locomotive Department of the Palestine Railways and lost his life during the rioting some years ago.

Mr. R. C. Bucquet, who for some years has been Assistant General Manager of the Nyasaland Railways, has been appointed General Manager in succession to Mr. H. G. Duncan, whose retirement we recorded in our October 31, issue.

Mr. Charles Peter Couch, President, Kansas City Southern Railway, has been elected Chairman of the board, in succession to his brother, Mr. Harvey C. Couch, whose death we recorded in our October 24 issue. Mr. William N. Deramus, Executive Vice-President, has been elected President. Mr. Deramus is also Executive Vice-President of the Louisiana & Arkansas Railway.

Mr. A. E. Cook, General Manager of Craven's Railway Carriage & Wagon Co. Ltd., has been appointed a Director of the company.

Mr. R. W. Higgins, who, as recorded in October 31 issue, retired from the position of Divisional Superintendent, Exeter, Great Western Railway, at the end of the year, was born in 1877 and educated at Pelham House School, Folkestone, and at Marlborough College. Mr. Higgins entered the General Manager's office in 1895, and in 1917 was appointed Assistant Divisional Superintendent at Worcester. He became Superintendent of that division in 1929. He has been in charge of the Exeter Division since 1933.

Mr. Horace L. Walker, General Attorney, Chesapeake & Ohio Railway, New York, Chicago & St. Louis Railroad, and the Pere Marquette Railway, has been appointed General Solicitor of these railways in succession to Mr. M. Carter Hall, whose death we recorded in our October 31 issue.

We regret to record the death on September 23 of Mr. Thomas Addison Busby, who was for many years Managing Editor of the *Railway Age*, and retired in 1908. Mr. Busby was 83 years of age.

Mr. Arthur Chamberlain, whose death we recorded in our August 29 issue, has left estate valued at £310,683 (net £306,336). Mr. Chamberlain was a Director of the General Electric Co. Ltd., Stewarts and Lloyds Limited, Tubes Limited, and of various other companies.

Questions in Parliament

Below are summarised Answers to Questions in Parliament affecting transport. The Minister concerned and the date of the Answer are given in parentheses.

Identification of Underground Stations

On open stations lighting and the size of lettering are restricted by regulation, but the lights are placed so as to make the best use of the permitted illumination, and the staff has been instructed to announce stops clearly. The London Passenger Transport Board is considering altering the position of the openings in the protective netting on the windows of railway carriages and enlarging them to assist passengers on the Underground railway to identify stations as they pass. (Colonel J. J. Llewellin, Joint Parliamentary Secretary, Ministry of War Transport, October 22.)

Railway Trains Accommodation

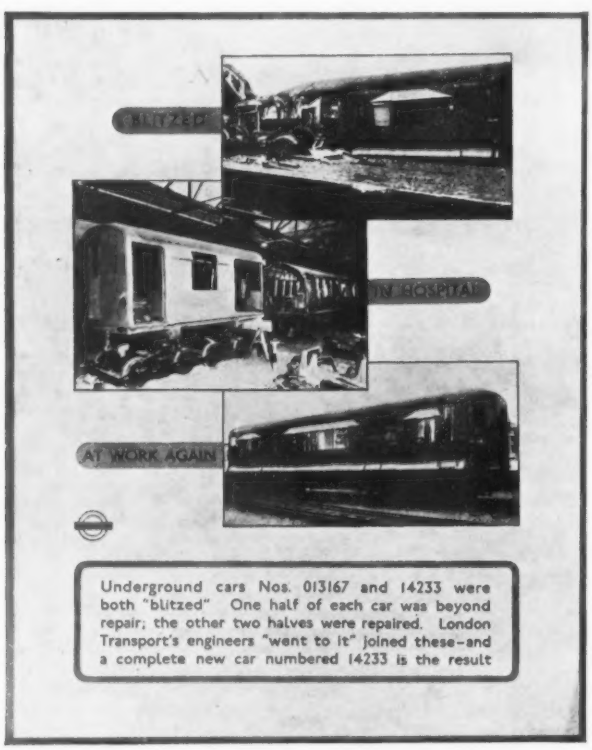
Since the commencement of the war there has been a decrease in London suburban traffic, but train services at peak hours have been substantially maintained. During these periods some trains are crowded, but no general deterioration in the conditions has taken place. When one-class services were introduced on October 6, the railways either substituted third class carriages for firsts, or converted the firsts to thirds. Where there is evidence that difficulties exist on a particular route the train services are augmented if it is practicable to do so without interfering with the movement of vital war traffic. (Colonel J. J. Llewellin. October 23.)

XUM

TRANSPORT SERVICES AND THE WAR—114

Merging two damaged London Transport cars—Passenger and freight services in Germany—Balkan railway news—The "Q" campaign—G.W.R. mobile canteen

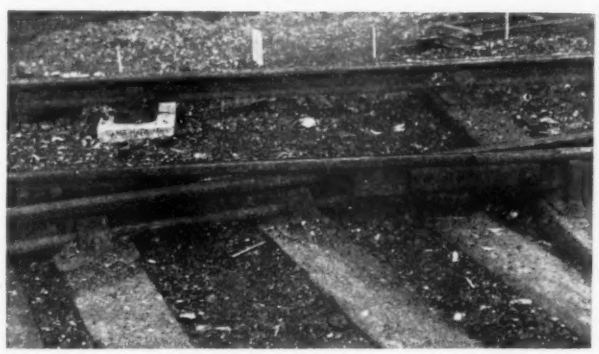
Two portions of different underground railway cars of London Transport, which were partly destroyed by bombs, were shown in the illustration at page 194 of our August 22, 1941, issue with the damaged portions cut away and the undamaged parts about to be joined to make a new car. This interesting operation has recently been made the subject of a new London Transport poster (reproduced herewith), and we are now permitted to supplement the information previously given. District Line trailer car No. 013167 was badly damaged by enemy action in the autumn of 1940. Three-quarters of the length of the car were almost completely destroyed, but one end was not seriously damaged. A week or so later, Metropolitan Line motor car No. 14233 had one end wrecked and the remainder of the body deformed by blast blowing the roof upwards. It was decided to construct one motor car from these two damaged vehicles. Car 14233 had the damaged end cut off, with all members including the solebars and main longitudinals cut through on a vertical place running just inside the first pair of double doors. The good end of Car 013167 was cut through on an identical plane. Thus when the two portions were butted together all members could be joined by welding without make-up pieces. Prior to bringing the two portions together, the roof members of Car 14233 were removed and re-set to the correct shape. The sides of the car were pressed out and the roof members re-fitted. The two portions having been lined up, the solebars of the composite car and the main longitudinals were welded by arc welding. Cover straps were also welded over the solebar joints to give additional strength. The original roof sheets were then replaced, and only one new sheet—that at the joint—was required. The interior woodwork was largely salved from the two cars, as were the majority of the fittings and seats. A car, No. 14233, has thus been put into service using very little new material other than glass, ceiling board, and two sheets of steel panel.


"BLITZED"
IN HOSPITAL
AT WORK AGAIN
Underground cars Nos. 013167 and 14233 were both "blitzed" One half of each car was beyond repair; the other two halves were repaired. London Transport's engineers "went to it" joined these-and a complete new car numbered 14233 is the result

London Transport poster showing merged cars

A Bogie Bridge for Emergency Use

The recent construction, for use in emergency only, of an avoiding line as an alternative route to a short but important stretch of double-line railway involved crossing an existing single-track branch line. The relation of levels did not allow of the avoiding line crossing over or passing under the branch line, but compelled the former to be laid at a level of 5 ft. below the latter. Thus, when the avoiding line is in use, a part of the branch is not available for traffic, but fortunately the branch line has a secondary access. The necessary "opening" through the branch line has been arranged by the construction of a movable bridge of a somewhat unusual, if not unique character, but withal simple, and free from expensive mechanism. The bridge is



Crossing jumper in position

normally in place to carry the single track of the branch. The photographs reproduced on page 476 clearly show the arrangements.

A low pier in the six-foot way of the avoiding line and clear of the structure gauge breaks the skew opening into two 17-ft. spans. The girders of each span consist of a pair of rolled steel beams 22 in. deep, carrying flat-bottom running rails on the top flanges. The abutments and the central pier carry bearing plates with raised side guides or stops to house and hold the girders in the position which ensures true alignment of the running rails they carry. For the removal of the bridge, one span at a time, to a position clear of the double track which it crosses, platelayers' bogies travelling on run-offs are used.

As one of the photographs reproduced shows, the run-off rails are at first parallel with the track proper, but, when clear of the abutments, curve out sharply to reach a position which affords standage clear of the lines for the superstructure loaded on the bogies. Packings under the chairs of the run-offs raise the rails 1½ in. above the track proper, and this extra height affords the facility of crossing the running rail by inserting a simple jumper. The jumper, illustrated herewith, is fashioned from a bull-head rail, with bottom flange and part of the web cut away; when in running position, it is held in place by fishplates. It is merely dropped in.

There are four bogies in all, a pair for each span, one under each girder, and in this position they normally remain, so that movement of the bridge can be undertaken immediately an emergency arises. A plate fixed to the floor

of the bogie connects through a simple screw jack arrangement with a plate fixed to the bottom flange of the girder above. Manipulation of the screw raises the girder so that its bearing clears the guides or stops of the bearing plate. The screws on each of the two bogies are, of course, operated in unison. When clearance of bearing plate stops has been achieved, the bogies with their loads are ready for pushing to their position on the run-offs. As a preliminary to jacking up the bridge, all fishplates are, of course, removed from the branch line rail joints over abutments and central pier. When both spans have been pushed, on their pairs of bogies, into the extremities of the run-offs, the miniature " trains " are trapped by swing chock blocks. These blocks are connected by chains with the movable jumper crossings, and cannot be swung into position and locked, with Annetts Key, until the jumpers have been withdrawn from their working position in which they foul the running line. Signalling arrangements are such that until the operation described has been completed the avoiding line cannot be brought into use.

We are indebted to the August issue of the *Journal* of the Permanent Way Institution for these details and the illustrations reproduced opposite and on page 476.

Standing Passengers in Buses

The Minister of War Transport made an Order on October 22 authorising Regional Transport Commissioners to permit buses to carry standing passengers up to a number not exceeding one half of the number of passengers for which the vehicle, or, in the case of a double-deck vehicle, the lower deck, has seating capacity, up to a maximum of 12. This concession is subject to the conditions that no standing passengers may be carried on the upper deck of a double-deck vehicle and that there must not be any unoccupied seats in the vehicle. The Order, entitled the Standing Passengers (No. 2) Order, 1941, will be administered by the Regional Transport Commissioners in their regions in consultation with officials of the Transport & General Workers Union.

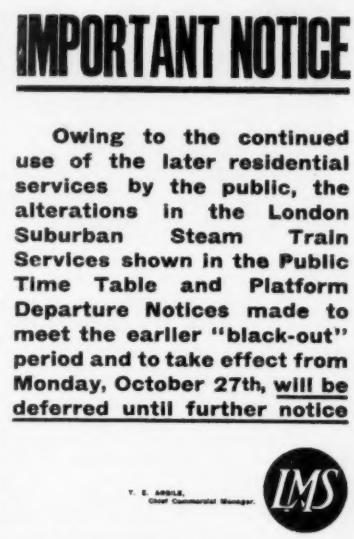
Under the original Standing Passengers Order, dated August 19 last, Regional Transport Commissioners are also authorised to permit single-deck buses engaged on specific services to carry standing passengers up to the total number for which seating accommodation is provided, subject to a maximum of 30 and on conditions that vehicles are specially adapted (see our September 19 issue, page 286).

New Mersey Tunnel Regulations

Revised by-laws concerning the use of the Mersey road tunnel came into operation on November 1. Speed regulations are now as follow: Slow lanes, minimum 6 m.p.h., maximum 21 m.p.h.; fast lanes, minimum 21 m.p.h., maximum 30 m.p.h. Dangerous goods will in future be allowed to travel along the slow lanes by permission of the traffic manager, who will " provide an escort and take such other precautionary measures as he may deem necessary."

The London Evening Traffic Peak

Despite the earlier hour of blackout, Londoners are apparently not yet hastening their return home in the evening, and some business houses are not introducing their winter closing hours until November 10. The London Passenger Transport Board began its winter schedules for the Underground railways on October 6, for Country Buses and Green Line coaches on October 8, and for Central Buses, trams, and trolleybuses on Wednesday of last week, October 29. At present the peak is reached during the later part of the intensive service, but this is expected to adjust itself within a few days. Due to the continued use of the later residential services, the L.M.S.R. has deferred until further notice the London suburban timetable changes announced for October 27.


IMPORTANT NOTICE
Owing to the continued use of the later residential services by the public, the alterations in the London Suburban Steam Train Services shown in the Public Time Table and Platform Departure Notices made to meet the earlier "black-out" period and to take effect from Monday, October 27th, will be deferred until further notice
L.M.S.

The Netherlands Railways in 1940

The 1940 annual report recently issued by the Netherlands Railways gives some interesting facts of working under war conditions. Until May 9 the country was at peace, and the railways were worked normally, with the exception of a portion of the rolling stock which had been requisitioned by the War Department, and was not available for public traffic The German invasion began in the early hours of May 10 and from then until May 15 public traffic on all lines was at a standstill. On May 15 the Dutch forces surrendered, and on the following day passenger traffic was resumed. On May 17, the report states, transport of market produce to Germany was resumed ; the trains conveying it were the only goods trains run until May 27, when goods traffic generally was resumed, though throughout the rest of the year traffic was limited by the destruction of almost all the principal bridges and of many stations. By the end of the year, however, all bridges except one were in use again, and stations had been repaired. In the transition period extensive use was made of buses and lorries for the transport of passengers and goods by road on sections where the rail route was not available. As the railways were repaired, road transport was gradually abandoned, except on certain routes where no railway or tramway could be used. Financial and statistical details form the subject of an editorial article at page 463 of this issue.

Above: Warning "sticker" on the offside rear of London Transport buses

Right: The latest British Railways poster to further the salvage campaign

A New Waterway in Sweden

A ship canal across the Falsterbo Isthmus in Sweden, at the southern entrance of the Sund, west of Trelleborg, on which work was begun in October, 1940, was completed on July 21 last. This new waterway between Höllviken and Kämpinge Bight is 1,750 yd. long and, owing to the shallowness of the coastal waters at its western end, a channel 15½ miles long had to be excavated as far as Flint Channel. On the Baltic side, however, the water is sufficiently deep at a distance of only a few hundred yards from the coast. About 5,495,000 cu. yd. of spoil were excavated during the construction of the canal. To prevent heavy seas from interfering with incoming or outgoing traffic, extensive breakwaters had to be built at both entrances of the canal. Dredging will always be necessary as the sea-bottom and shores are fast-moving quicksands, and for this reason also

XUM

Der Güterverkehr, den die Deutsche Reichsbahn im großdeutschen Raum zu bewältigen hat, ist gewaltig angestiegen. Vierjahresplan, Rüstungsbetriebe, Versorgung der Bevölkerung und vor allen Dingen unsere Wehrmacht stellen größte Anforderungen an den Güterwagenpark. Alles kommt daher darauf an, jeden vorhandenen Güterwagen bis zum letzten auszunutzen.
Ladegew. 20 000 kg
Tragf. 21 000 kg
Bodenfl. 21,3 m²
Ladelänge 7,7 m
Gew.d.W. 8 980 kg
GLEIS-WAAGE
Waage

Auf jedes Kilo kommt es an!

Umsomehr Güter kann die Deutsche Reichsbahn täglich befördern, je vollständiger jeder einzelne Güterwagen bis zur Höchstgrenze ausgelastet wird. Der hohe technische Stand der Reichsbahngüterwagen hat es erlaubt, die Beladung der Wagen im innerdeutschen Verkehr bis 1000 kg über die am Wagen angeschriebene Tragfähigkeit zuzulassen. Durch diese Maßnahme ist es möglich, den Verfrachtern erheblich mehr Wagenraum als bisher zur Verfügung zu stellen. Beachten Sie dieses Beispiel: Wenn bisher ein Wagen mit 15 Tonnen bis zur Tragfähigkeit von 17,5 Tonnen beladen wurde, so kann er jetzt eine Belastung bis zu 18,5 Tonnen erhalten. Erste Pflicht für alle Verkehrtreibenden ist es, jeden Wagen möglichst bis zur Höchstgrenze auszunutzen, denn nur dann kann diese Maßnahme die von der Deutschen Reichsbahn gewünschte Erleichterung für alle bringen. Berücksichtigen Sie daher diese Neuerung bereits beim Abschluß Ihrer Lieferverträge und bei Ihren Bestellschreiben. Vielfach werden heute noch aus alter Gewohnheit und ohne Rücksicht auf die erhöhte Grenze der Tragfähigkeit z. B. 300 Sack zu je 50 kg bestellt, obwohl jetzt der Güterwagen 370 Sack befördern kann und soll.

Hilf der Deutschen Reichsbahn und Du hilfst Dir selbst!

Beachten Sie diese 10 wichtigen Regeln für den Verfrachter!

1. Güterwagen schnellstens be- und entladen. Rückgabe der Wagen möglichst vor Ablauf der Ladefristen: Überschreitung der Ladefrist hat Ausfall verteuern Lagerraums zur Folge.
2. Wagen rechtzeitig und nur für den tatsächlichen Bedarf bestellen. Angebotene Ersatzwagen verwenden, selbst wenn kleine Unbequemlichkeiten damit verbunden sind.
3. Pünktliche An- u. Abfuhr der Güter. Mit der Be- und Entladung sogleich nach Wagenbereitstellung beginnen.
4. Für Güterwagen gibt es jetzt keine Sonntagsruhe. Daher Güter, wenn möglich, auch Sonntags verladen, für eingegangene Güter besteht die Pflicht zur Entladung an Sonntagen.
5. Güterwagen beim Be- und Entladen nicht beschädigen. Ladenahe instandhalten. Güter ordnungsmäßig und betriebssicher verladen.
6. Durch zweckmäßige Lagergeräte und Hilfsmittel das Be- und Entladen erleichtern.
7. Auslastung der Wagen bis zum Ladegewicht und nach Möglichkeit jetzt im innerdeutschen Verkehr bis 1000 kg über die am Wagen angeschriebene Tragfähigkeit. Raumverhältnis durch geschicktes Stapeln der Güter, ganz besonders durch sachgemäßes und übereinstimmendes Verladen sperriger Güter.
8. Nicht mehr Güter zu gleicher Zeit bestellen, als tatsächlich entladen werden können.
9. Entladung sogleich beim Eingang der Versandanzeige des Absenders oder bei der Avisierung durch die Güterabfertigung vorbereiten, Fuhrwerke und Ladepersonal schon im voraus für die Zeit der bevorstehenden Entladung bestellen.
10. Frachtbriefe und sonstige Begleitpapiere sorgfältig ausfüllen zur Vermeidung von Rückfragen.

Bitte ausschneiden, aufheben und immer wieder lesen!

The second of the German State Railway freight traffic advertisements

the banks of the canal are protected by extensive walling. It was hoped that the canal would be completed in three or four months but the difference of 3·28 ft. in level between the North Sea and the Baltic necessitated the inclusion of a simple type of sluice, to prevent a current from being set up in the canal; it was calculated that the current would have had a velocity of 39·36 ft. a second, that is, 6 knots.

The island formed by the new canal is connected to the mainland by a combined rail and road bridge, the lifting span of which is the old Knippelsbro bridge of Copenhagen. The railway crossing the canal is the standard-gauge single-track line connecting Falsterbo town in the extreme south with Vellinge on the mainland (11·2 miles) and thence, *via* the main line, with Malmö, a further 11·2 miles. A system of automatic signalling has been installed, by which a train approaching the bridge is automatically side-tracked on to a safety siding if the bridge happens to be open at the moment. Rail traffic has precedence for the right of way, with canal traffic next and road traffic last. The canal has been built in order to enable Swedish shipping to ply between the North Sea and the Baltic undisturbed by German interference. The canal was opened to public traffic in the second fortnight of August, but for the time being vessels are allowed to proceed only by daylight, as the lighthouses and beacons along the new waterway are not yet completed. Vessels in transit have to take pilots on board, and pilots are available at both ends of the canal. The bottom width of the navigable channel is 131 ft. 2 in. and the maximum draught of vessels admitted at medium water level is 20 ft. Vessels over 410 ft. long and having a beam of 65 ft. 7 in. are able to pass freely through the canal.

Croatian State Railways

There is general and bitter complaint among the trading community at the 50 per cent. increase in tariffs reported on page 393 in our issue of October 17. It is pointed out that the country's economic life has been hard hit by the unusual extent of the increase, more so, as the Jugoslav railway rates used to be the lowest in Europe. Though it is recognised that an increase was necessary, a more gradual application of the new rates to the country's economic life would have been appreciated.

Railway circles maintain an altogether different point of view. They point to the railways' performance in recent months since they have been carved out from the Jugoslav railway system, and also emphasise the necessity for repairs to the lines and rolling stock following the period of fighting. To all this must be added, they say, the heavily increased prices for coal and other materials. It is emphasised that to attain a balance between receipts and expenditure an increase of the goods rates by some 300 per cent. would have been necessary. As a concession, however, consignments of cereals have been exempted from the 50 per cent. extra charge.

Serbian State Railways

The Serbian State Railways are credited with the intention to increase their goods rates by 15 per cent., with a view to adapting them to the general increase of the price level, but the occupation authorities are still withholding their consent.

Serbo-Bulgarian Frontier Stations

In addition to the other Jugoslav or Serbo-Bulgarian frontier stations mentioned on page 393 in our issue of October 17, others are Leskovac and Grdelica on the main line from Belgrade to Salonica *via* Nish and Skoplje. Leskovac is the Serbian and Grdelica the Bulgarian frontier station and they are 171 km. and 157 km. respectively north of Skoplje on the line *via* Vranje; it should be noted that Uroshevac and Grlica

are the frontier stations on the alternative route between Nish and Skoplje *via* Pristfna.

Bulgar-Greek Frontier Stations

The two Jugoslav frontier stations of Djevdjelija and Kremenica on the standard-gauge lines running from Skoplje and Bitolj, respectively, to Salonica are in Bulgarian-occupied territory, but are still functioning as frontier stations in respect to the Greek railways. Djevdjelija is 103 miles (166 km.) to the south of Skoplje and only 49 miles (79 km.) to the north of Salonica; the corresponding Greek frontier station is Aidomeni. Kremenica is 10½ miles (17 km.) to the south of Bitolj, and 127 miles (204 km.) from Salonica.

More Guerrilla Demolitions

Guerrillas have again been active in Bosnia blowing up the 2 ft. 6 in. gauge line near Doboj between Brod and Sarajevo, and also the Sarajevo-Belgrade line of the same gauge near Ustipraca, as the result of their successes over Croatian and Axis troops.

Freight Traffic in Germany

The second of the series of German State Railway advertisements, which we reproduce opposite, bears the familiar 10 rules for consignors, and special wording of which the following is a translation:

EVERY KILO IS OF MOMENT

The more nearly every individual goods wagon is loaded up to its maximum capacity, the more goods can the German Reichsbahn carry daily. The excellent construction of the Reichsbahn wagons has made it possible to permit wagons used for traffic within Germany to be loaded up to 1,000 kg. above the carrying capacity marked on the vehicles. Due to this it is possible to allow consignors considerably more wagon space than hitherto. The following is an example: Whereas in the past a 15-*tonne* wagon could be loaded up to a carrying capacity of 17½ *tonnes*, it can now carry a load of up to 18½ *tonnes*. The first duty of all concerned is to use every truck up to its maximum capacity as far as possible, as only then can this measure bring about the advantages desired by the German Reichsbahn for the benefit of all. Please therefore bear this innovation in mind immediately when placing your delivery contracts and orders. For instance, it very frequently happens, from old usage and regardless of the increased carrying limit, that 300 bags of 50 kg. each are ordered, although the trucks now can and should carry 370 bags.

Help the German Reichsbahn and you help yourself

German Transport and Passenger Service Cuts

With the continued German advance into Russia, and the lengthening lines of communication, German transport must of necessity experience increased strain, and it is reported that railway and road vehicles are being diverted from all the German-occupied countries of Europe to meet the needs of the Eastern Front. The cancellation of all night passenger trains in Norway is said to be due in part to a further "loan" of Norwegian rolling stock to Germany. The Todt organisation is reported to be making roads, and repairing railway embankments and bridges, but changing the gauge of Russian railways in occupied territory from 5 ft. to 4 ft. 8½ in. is apparently carried out mainly by the German Army Railway Corps.

All railway services in Germany, previously stated to have been cut by 25 per cent., were reduced by a further 30 per cent. on November 1, according to a Berlin dispatch reaching Stockholm. The remaining train services are being used only for official business, say the report. "Besides a shortage of fuel, the colossal demands of the Russian campaign have caused a shortage of carriages and locomotives," writes the Berlin correspondent of the Swedish newspaper *Social Demokraten*. "In addition, the intense cold in Eastern areas and the freezing of potatoes and other foods has necessitated the transport of potatoes in third class passenger carriages instead of in goods wagons, in order to ward off a threatened potato shortage."

Portuguese Railway Services Curtailed

The railway services of Portugal are reported to have been curtailed drastically due to shortage of coal. On the main line between Lisbon and Oporto, where there were formerly two express trains a day, there are now only four a week. Many locomotives are said to be burning wood, with which the country is well supplied.

British Rolling Stock Arriving in Turkey

The Turkish Minister of Commerce has announced that measures are being taken to increase the freight-handling capacity of Alexandretta, near the Turko-Syrian border, and that deliveries of locomotives and wagons from Britain have begun. The placing of a contract with Braithwaite & Co. (Engineers) Ltd., London, for the reconstruction of piers and improvement of harbour facilities at Alexandretta was recorded in THE RAILWAY GAZETTE of October 3.

Quicker Turn-Round Campaign

The letter "Q" has been adopted by the Ministry of War Transport as the symbol of a country-wide campaign for the quicker turn-round of every type of vehicle needed for the movement of war supplies. This campaign follows the successful drive last winter to speed the turn-round of ships. At that time and in the months immediately following the losses at sea were so serious that vital supplies could only be maintained by making every ship afloat do more voyages. The measures taken by the Government to reduce the time spent in discharging, loading and undergoing repair had the desired effect, and the saving in time has been equivalent to the addition to our merchant fleets of many hundreds of thousands of tons.

A similar problem is now arising on the inland transport services, due not to losses of vehicles but to the expansion of war industries. Present indications are that coal traffic will be heavier than last winter by about a quarter of a million tons a week. Substantial increases are also expected in other freight traffic and in the numbers of workers to be conveyed to and from the war factories. Although transport undertakings have carried out important improvements they are severely handicapped in their efforts to increase carrying capacity by blackout restrictions, the calling up of large numbers of workers (totalling more than 100,000) and the impossibility of obtaining new vehicles, rolling stock, and running lines in anything like the numbers required to offset the increase in traffic and normal wastage of existing stocks.

It is estimated that to meet all demands, the transport industry needs at least 100,000 more wagons and lorries. They will not be forthcoming because the manufacture of aeroplanes, guns, and tanks must come first. Instead the Government is planning to obtain a similar increase in carrying capacity by eliminating all unnecessary use of transport and all forms of waste. This will be done by saving time on the turn-round, and by the rationalisation of the distribution of goods.

The organisation of each of the main branches of the transport industry is being strengthened, on the operational side, to ensure that there is no avoidable delay. More mobile cranes are being provided and where these are not available undertakings are being urged to improvise other time and labour saving devices. In addition, extensive new works costing £6,000,000 are being completed on the railways, and the bulk of these will be ready to afford valuable relief this winter. They include new loops, and sidings, and running lines, and the improvement and enlargement of exchange junctions.

The essence of the problem is how to reduce the length of time between the arrival and release of each vehicle. If time can be saved on actual loading and unloading operations, by the increased use of mechanical devices, such as mobile cranes, this will be all to the good; but the main object of the campaign is to avoid the unnecessary detention of vehicles under load. Urgently wanted wagons are frequently still left idle for days because more loads are forwarded at one time than the consigness can discharge. The remedy for this lies in closer co-operation between the parties concerned, and in notification of consignees as early as possible that goods are being forwarded. Labour requirements should so far as possible be planned in advance and arrangements made to maintain work if necessary, after dark. Counts taken in the second quarter of this year showed that the average number of wagons standing under inward load for more than 48 hours was nearly 60,000.

Distinctive symbol for the slogan of the "Q" campaign

There are many ways in which traders can speed up the turn-round of wagons, such as (i) by adjusting the rate at which supplies are ordered forward to their capacity to discharge. This includes co-operation with other traders so that the best use may be made of available labour by the pooling of resources, and (ii) by improving by all possible means the rate of intake. By labour saving devices, improvements of layout of sidings and premises, increasing storage capacity, and by adjusting hours of working, wagons ought not to stand idle under load throughout a weekend.

N.C.C. October Alterations

Alterations effective on the Northern Counties Committee lines of the L.M.S.R. from October 12 include later departures for several expresses from Belfast, the 2.40 and 7.10 p.m. to Londonderry leaving at 3 and 7.20 p.m. (the latter is also slowed 10 min. and reaches Londonderry at 10 p.m.), while the 5.15 p.m. for Portrush leaves at 5.25 p.m. The 6.20 a.m. to Londonderry is accelerated to arrive at 9.35 instead of 9.45 a.m., but the 11.50 a.m. is detained 32 min. at Coleraine, and does not reach Londonderry till 3.35 p.m., 54 min. later; the refreshment car on this train is diverted to Portrush, which is reached at 1.58 p.m., 6 min. earlier

In the reverse direction most of the Londonderry-Belfast services are slowed about 5 min.; among changes in running times, the 7.55 a.m., 1.25, 3.55, and 6.25 p.m. from Londonderry to Belfast leave at 7.50 a.m., 1.20, and 6.5 p.m., the 3.0 p.m. boat train from Londonderry to Larne at 2.45 p.m., and the 12.5 p.m. from Portrush to Belfast at 12.40 p.m. The 7.45 a.m. from Portrush to Londonderry and the 5.55 p.m. return train are cancelled. The 9.20 a.m. from Ballymena to Belfast leaves at 8.55 a.m. and is accelerated 5 min. Six refreshment car services are still being run in each direction daily, three between Belfast and Londonderry and three between Belfast and Portrush.

Sir James Milne's Message to G.W.R. Staff

Sir James Milne, General Manager of the Great Western Railway Company, has sent the following message to the staff of the company through the *Great Western Railway Magazine*:—

"Two years of war have meant for all concerned in the operation of the railways of this country two years of strenuous endeavour. The result has been no small achievement by the transport industry generally and by the Great Western Railway in particular. All the many urgent calls from the Fighting and Supply Services have been met, as well as the essential transport needs of the trading and travelling community. All grades of railwaymen and railwaywomen who have contributed towards this achievement have every reason to be proud.

"Now, as we enter upon the third winter of the war, when production is increasing and even more pressing and urgent calls are being made upon the railways, we all must make a still greater contribution to the National effort to 'finish the job.'

"This call is made when conditions are likely to become still more difficult; when the black-out, fog and frost, long hours, depleted staffs, enemy action and other possible hindrances will demand even greater endeavour and sacrifice.

"I am confident that each member of the Great Western staff will not only use every endeavour to maintain the high standards already achieved, but will strive to carry out his or her individual task just a little better than before, if that be possible, remembering the momentous and inspiring words of our Prime Minister when he said:—

> "'Give us your faith and your blessing and under Providence all will be well. We shall not fail or falter. We shall not weaken or starve. Neither the sudden shock of battle nor the long-drawn trials of vigilance and exertion will wear us down.'"

Mobile Picture Gallery Fund

At Paddington station on November 3 Sir Alan Anderson, Chairman of the Railway Executive Committee & Controller of Railways, Ministry of War Transport, presented to representatives of the Fighting Forces cheques amounting to £563 which has been raised by the railway coach which has toured the country with an exhibition of photographs of railways in wartime. Reference to this coach was made in THE RAILWAY GAZETTE of June 13 last. The tour has extended over 1,500 miles, and the exhibition has visited 28 large railway stations throughout Britain; 50,000 visitors have viewed the collection, and 20,000 copies of the small photographic souvenir booklet have been sold. Sir Alan Anderson presented cheques for equal amounts to Brigadier W. S. Turner, who received the gift on behalf of the War Films & Photographic Fund of the Army Council, to Captain Dowding, on behalf of the Royal Naval Dependents Fund, and to Group-Captain Lord Willoughby de Broke, on behalf of the Royal Air Force Benevolent Fund. Among those present at the ceremony were Sir Charles Hambro, Chairman of the Great Western Railway Company, Sir James Milne, General Manager, and a number of officers of the four main-line railway companies.

G.W.R. Mobile Canteen

As a development of its scheme of air raid precautions, the Great Western Railway Company has designed and constructed a mobile motor-trailer canteen which, should heavy raids again be experienced, can be sent immediately by train to any town on the company's system where feeding arrangements have temporarily been disorganised. The emergency canteen is intended as a service to the members of the company's staff, and it will be available to provide snacks and hot and cold drinks to G.W.R. workers who, as a result of intensive enemy bombing, might otherwise find difficulty in obtaining food. Sir Alan Anderson, Chairman of the Railway Executive Committee and Controller of Railways, Ministry of War Transport, inspected the canteen during a visit to Paddington station on November 3.

The vehicle, which is illustrated at page 475 is a 6-ton Scammell articulated drop-frame trailer of an overall length of 21 ft. The vehicle is painted in Great Western colours.

The mobile canteen is well-equipped and almost entirely self-contained. There is a 125-gal. capacity water tank fitted with semi-rotary pump for filling the urn and the auxiliary water tank; the 12-gal. auxiliary water tank is for the purpose of supplying the sink. The sink itself, together with each side draining boards, is of modern design and of stainless steel throughout. The equipment also includes, besides a tea urn and an oven, two Calor gas containers for the supply of gas to heat the oven and urn. There are plentiful cupboards and drawers for storing goods, and shelves and pigeon-holes for holding and displaying the foods. The serving counter is provided by a drop shutter running along the greater part of the canteen and protected from the weather by the upper part of the shutter.

The vehicle was designed in the company's Road Transport Department drawing office at Slough, and constructed in its entirety in the Great Western Railway carriage and wagon shops at Swindon. The trailer illustrated is being hauled by a Bedford-Scammell 6/8-ton articulated tractor, but the couplings of the trailer are adaptable, so that the vehicle can be attached to any of the articulated tractors which are in use at the company's various depots.

Urgent Need of Locomotives and Stock for Persia

In order to hasten supplies for Russia, the improvement of transport in Persia is probably the most urgent and vital railway war need at the moment. Though large quantities of rails are required for construction work and for laying additional crossing loops, marshalling and other yards, the immediate demand is mainly for more locomotives and rolling stock. Unfortunately India, the handiest and an ample source of supply, has no standard-gauge stock such as is required for Persia. Egypt also is favourably situated, but though she has about 650 locomotives and nearly 15,000 wagons of this gauge, the military demands upon these are already heavy. However, agency messages indicate that the British Government proposes to borrow some stock from that country and replace it with supplies from America as soon as it can be delivered. Other sources of supply of standard-gauge engines and rolling stock are Australia, America, and the United Kingdom.

Engines and Stock from Australia

In Australia part of the Commonwealth Railways system is of standard gauge, but it has only 68 locomotives and some 750 wagons. The New South Wales Government Railways, however, have 1,255 locomotives and about 23,000 wagons. Also, although far from Persia, any of this stock which can be spared can be transported thence with reasonable safety. It is not surprising, therefore, that the Australian Premier, in stating that standard-gauge engines are to be made available in the Dominion for Persia, said that in spite of the severe strain upon their own transport, it was a proper contribution on the part of the Commonwealth. He asked that Australian industries should make every effort to insure that essential supplies for their railways should be made good rapidly and increased beyond the point they had reached. The Premier of New South Wales also stated that the quantity of stock being sent was "a considerable contribution" and that a number of refrigerator vans were already in service in Persia. Overcrowding in that State and curtailment of extra holiday services at Christmas may have to be faced this winter, but such sacrifices will be cheerfully borne in the knowledge that they are enabling locomotives and stock to be sent to Persia, to help the Russians.

America Asked to Send Railway Material

Meanwhile, messages from Washington announce that Britain has asked the U.S. Government for large quantities of rails and rolling stock to be sent for use on the Trans-Persian Railway, for carrying supplies for Russia, under the Lease & Lend Act.

Diplomatic Relations with Mexico Resumed

On October 24 the Foreign Office announced that diplomatic relations with Mexico had been resumed and that Mr. Charles Harold Bateman, the Counsellor in the Foreign Office, had been appointed Envoy-Extraordinary and Minister-Plenipotentiary in that country.

Summer Time

In unoccupied France the clocks were put back one hour on October 6.

German Air Lines

The Deutsche Lufthansa A.G. is stated to be operating about two-fifths of the air services it worked before the outbreak of the war. The following figures have been published recently in respect of the year 1940:—

Aggregate distance flown, km.	5,000,000
Passengers carried	95,000
Passenger km. flown	55,000,000
Average distance per passenger flown km.	580
Weight of luggage and parcels carried, *tonnes*	440
Luggage and parcels, ton km.	343,000
Freight carried, *tonnes*	900
Freight *tonne-km.*	650,000
Mails carried, *tonnes*	1,000
Mail *tonne-km.*	946,000

XUM

RAILWAY AND OTHER MEETINGS

Buenos Ayres Great Southern Railway Co. Ltd.

The ordinary general meeting of the Buenos Ayres Great Southern Railway Co. Ltd. was held at River Plate House, London, E.C.2, on October 29. Mr. J. M. Eddy, C.B.E., Chairman of the company, presided.

The Secretary, Mr. N. F. E. Grey, having read the notice convening the meeting, and the auditors' report,

The Chairman said that the last meeting had been presided over by Sir Follett Holt, who had then said that he had asked his colleagues to release him from the heavy work entailed by the joint Chairmanships of the Southern and Western Railways.

The directors had hoped that he would continue to assist them as a member of the board. On reflection, however, prompted by the unselfish desire to give his successor a free hand, he had decided to retire, not only from the Chairmanship, but from the board. Sir Follett Holt had spent the best years of his life, and devoted his powers and great ability, in promoting the welfare of the undertakings which he had so skilfully directed, and it was with much regret that the directors had learnt of his decision. Fortunately, as Chairman of the Entre Rios and Argentine North Eastern Railways and an active member of the British-Argentine Railway Committee, his counsel was still at their service.

Mr. Eddy's colleague had asked him to fill the Chair and he was fully conscious of the responsibility that he had undertaken. He could only assure stockholders that he would, with the support of his colleagues, do his best.

The Chairman having put, and Sir Sam Fay having seconded, the resolution for the adoption of the report and accounts, Mr. Eddy continued:—

We meet again under the shadow of war, but I feel you will all agree we have good reason for thankfulness that, under the determined leadership of our great Prime Minister, we are without doubt in a stronger position than we were a year ago. Unfortunately, so far as our own immediate interests are concerned, the year has proved to be more than disappointing, but I am afraid we must all accept this disappointment as inevitable because of the appalling disturbance of world trade. Argentine has suffered in common with others.

The latest figures of Argentine exports for the seven months ended July, 1941, show a decrease in value of $174,000,000 compared with the corresponding period in 1940, with a tonnage reduction of 3,336,000 tons. This on top of a decrease for the full year of 1940, as compared with 1939, of 3,398,000 tons, means a total decrease in 19 months of 6,734,000 tons. Exportable surpluses on hand at the end of September were estimated for wheat 2¾ million tons, linseed 900,000 tons, and maize at over 8 million tons.

On the other hand, Argentine imports decreased for the seven months ended July, 1941, by 353 million pesos as compared with the corresponding period of 1940, with a tonnage decrease of 1,400,000. As a consequence of this curtailment of both export and import trade our gross receipts have been adversely affected, whilst the higher cost of railway materials, shipping freights, marine, and especially war risk, insurance, have greatly increased our working costs.

The Argentine Government's policy of helping the agriculturists by purchasing grain at a fixed price has had two beneficial effects. Firstly, a substantial part of the crop has been moved to the ports for storage pending export. Secondly, farmers have been provided with funds which have enabled them to purchase goods and necessities, thereby giving us return traffic.

With great regret we have had to carry forward to next year a debit balance of £535,000. Gross receipts show a reduction of £320,000, more than explained by the decrease in receipts from fine grain and maize of £424,000; the corresponding decrease in tonnage is 678,000 tons. Passenger receipts and receipts from "ancillary services" declined by £133,000, but this was offset by increases in receipts from "luggage and parcels" and "miscellaneous," totalling £135,000. Expenditure increased by £344,000. This is more than accounted for by an increase of £1 a ton in the price of fuel. Expenditure on renewals was heavier but savings in other directions have amounted to £127,000 and have reduced the adverse balance to £344,000. Train-kilometres decreased by over 7 per cent. although traffic ton-kilometres decreased by only 5 per cent.

Turning to the balance sheet; on the "assets" side there is a large increase under the heading "bills receivable." This is accounted for by the inclusion of a debt certificate for $4,218,000 or £368,000 at par, received from the Provincial Government in settlement of outstanding freight accounts. This transaction is also reflected under the heading "Government freight and other accounts" which shows a decrease of £327,000 compared with last year. This welcome reduction in the floating debt is due to an arrangement with the Province of Buenos Aires by which it has given the company a bill for arrears, and has also paid in cash the equivalent of £132,000 at par.

We learned with regret of the breakdown in health of the President of the Nation, Dr. Roberto Ortiz, and we sincerely hope for his recovery. The Government is being directed by the Vice-President, Dr. Castillo, to whom our good wishes likewise go. We hope that amongst his other cares he will devote his attention to the problems which are confronting our railways. For a long time it has been recognised in official and other circles that the railways should be assisted. The most important question under discussion is that of exchange. Working costs have increased and continue to increase, and the present system of applying a tax on our remittances is overburdening the railway industry. The railway workers also have to bear an appreciable proportion of the burden, which should fall upon the community as a whole. The Argentine Government has given the railway companies a rate of 16 pesos as compared with 17, but I submit that the Government, in considering the future of the railway communications, should remove the levy on railway remittances altogether, and grant us exchange at the same rate as it purchases it. As matters are at present not only are we supplying transport at practically no profit to ourselves but helping to subsidise general revenue and agriculture.

Another question which calls for attention is the co-ordination of road and rail transport. We have done everything we can to co-operate with the authorities in the construction of roads. In spite of our efforts, the principal constructions have been made alongside the railway tracks, creating two means of communication for the same volume of traffic, and introducing uneconomic competition to the benefit of the few at the expense of the community as a whole. To correct this in some measure, the Co-ordination of Transport Law was passed by Congress in 1937. It expressed the will of the legislature that transport by both road and rail should be controlled and uneconomic competition eliminated. So far the progress we had hoped for in this direction has not materialised.

Railways have always been strictly regulated on the grounds that they enjoyed a monopoly of transport, and notwithstanding the fact that any sort of monopoly there might have been has totally disappeared with the advent of road competition, these binding and restrictive regulations remain. We ask that the authorities place road carriers under the same legal control as the railways.

There is another point which I think it desirable to mention to you, and that is the insidious campaign which has been fostered by outside influence and has grown during the last two years under the guise of "National Economic Independence." Its true object is to prejudice British interests and endeavour to persuade the citizens of Argentina that their country is under British economic domination, and that British and especially railway capital, has been, and is, exploiting it.

No greater misrepresentation of the truth could be made. Railways, waterworks, and other utility companies are so deeply rooted in the country that they belong to Argentine, and the payment of interest on that capital is just as natural as the service of the foreign debt. It is well to emphasise that whilst private-owned railways have for a number of years paid no dividends on the greater part of their capital, the taxpayer has had to provide funds for the State-owned railways to pay full interest on all their capital.

A very superficial study of British railway history in Argentina would disprove any accusation of exploitation. It could only prove complete co-operation with the Government and other authorities in promoting the development and interests of the country and nothing more convincing to counter the false propaganda could be quoted than the terms of the protocol to the Roca-Runciman Agreement made between Great Britain and Argentina in 1933 and renewed in 1936:—

"That the Argentine Government, fully appreciating the benefits rendered by the collaboration of British capital in public utility and other undertakings, whether state, municipal, or private, carrying on business in Argentina, and following their traditional policy of friendship, hereby declare their intention to accord to those undertakings, as far as lies within their constitutional sphere of action, such benevolent treatment as may conduce to the further economic development of the country, and to the due and legitimate protection of the interests concerned in their operation."

The non-British staff of the Southern, in conjunction with that of the Western and Midland Railways, numbering in all some 40,000 men, has constituted a Red

XUM

Cross Committee to raise funds to assist the Allies, and no less than £12,000 has already been remitted. This money has been utilised in the purchase of mobile canteens and ambulances for the use of civil defence services of this country and £1,000 has been given to the Russian Red Cross.

I should also like to mention that 73 of the staff of the Southern and Western Railways have come home as volunteers to join H.M. Forces, and I am sure you will send your good wishes to them. We should also remember the key men who have had to stay behind.

I would like to place on record our great appreciation of the work done by the Chairman of our Local Committee and his colleagues, our General Manager, and his chief officers, and all the staff.

Lastly, our staff in this country under the inspiring leadership of Mr. Grey, our Secretary, has given unselfish service under difficult conditions.

The recent agreement between the U.S.A. and Argentina, introducing reciprocal reductions in import duties, should lead to an increase of trade between the two countries and strengthen the financial position of the latter. This will in turn react favourably upon the railways by money being made available to agriculturists for the purchase of goods and other necessities. The imminent agreement with Canada should have a similar effect. Our main hope, however, rests upon the terms of the Atlantic charter, which has been accepted by the Allies as a whole.

As the Prime Minister described Canada as being the "linchpin" between Great Britain and the U.S.A., so our railways can be considered the "linchpin" between Great Britain and Argentina. The welfare of this great asset is as important to the one country as to the other. When postwar days come Great Britain will more than ever before have need of all assets which remain to her overseas and Argentina will require the markets she enjoyed before the war.

In recent weeks our traffic receipts have shown substantial increases; the total increase up to date is over 3½ million pesos, and there are still stored up-country over one million tons of grain awaiting transport. It is too early to give any idea of crop prospects.

The report and accounts were adopted, the retiring directors re-elected and the auditors re-appointed. The proceedings closed with a vote of thanks to the Chairman, directors, and staff.

Notes and News

Bengal Time.—Assam is adopting the new Bengal time, and clocks in the province were ad anced an hour on Indian Standard Time from midnight on October 31

Leeds Corporation Light Railways.—The Minister of War Transport has recently made the Leeds Corporation Light Railways (Extension) Order, 1941, authorising the construction of a light railway in the City of Leeds.

Isle of Wight Ferry Co. Ltd.—The *London Gazette* of October 24 notifies that the name of the above-named company will, at the expiration of three months from that date, unless cause is shown to the contrary, be struck off the register, and the company will be dissolved.

U.S. Freight Loadings.—Statistics issued by the American Railway Institute show that loadings of revenue freight for the week ended October 18 totalled 922,900 cars. This represents an increase of 19,000 cars on the previous week and an increase of 109,000 cars on the same week last year.

Great Southern Railways (Eire).—For the 42nd week of 1941 the Great Southern Railways Company reports passenger receipts of £37,989 (against £30,182), and goods receipts of £66,487 (against £58,640), making a total of £104,476, against £88,822 for the corresponding period of the previous year. The aggregate receipts to date are passenger £1,690,761 (against £1,504,289, goods £2,201,745 (against £1,978,414), making a total of £3,892,506 (against £3,482,703).

Society Islands Railway.—The only railway in the Society Islands is a light line of 2 ft. gauge operated by the Compagnie Francais des Phosphates de l'Oceanie, a French company which quarries phosphate on the island of Makatea. Only about 12 miles of track are laid, less than half of which is permanent. The railway carries no public traffic, but is used exclusively for the transport of phosphate rock from the quarries to the mill. The total equipment consists of 5 German-built steam locomotives and about 75 small dump cars.

Italian Railway Accidents.—Several railway accidents, some causing loss of life, have been reported from Italy within the last week or so. In a train collision between Lanciano and Castel Trentano in Tuscany, two persons were killed. In another collision, at the Circumvesuviana station at Naples, 27 were injured. An express was derailed and crashed into the station at Potenza in Southern Italy, on the Naples—Taranto line, causing injuries to 20 persons. Derailment of a train near Alessandria caused the death of two and injury to 40 persons.

Spanish Railway Suspends Payment.—By an Edict published in Barcelona and London on October 18, creditors of the Compañia General de Ferrocarriles Catalanes, S.A., are given twelve days in which to accept or oppose the agreement arising out of the suspension of payments by the company. The Catalan company operates 195 km. (121 miles) of metre-gauge railways between Barcelona, Manresa and Martorell, of which 11 km. are electrified.

Additions to Export Control Licence List.—Under a Board of Trade Order (S.R. & O. 1941, No. 1615), which comes into force on November 6, licences will be required for the export to all destinations of a number of additional forms of iron and steel (including alloy steel), and of articles manufactured wholly or mainly from iron or steel. The Order also extends the existing prohibitions relating to machine and other tools, paper-insulated wire and cables, and certain types of railway locomotives and vehicles.

More Long Welded Rails in America.—Continuous lengths of welded rails have recently been laid in Tunnel No. 2 on the Edgewood cut-off in the Bluford District of the Illinois Central System. Sixteen 66-ft. lengths of 112-lb. rails were welded at Bluford last August into sections 1,056 ft. long. These sections were then conveyed on flat cars to the tunnel, where they were welded together, making a continuous rail of more than 7,000 ft. in length through the tunnel. The welding was by flash-butt process, for which the welding plant was mounted in railway vehicles. All welds were normalised, and this process, together with grinding and finishing, was carried out in similar railway-mounted plant.

U.S. Class I Railroads Earnings.—Class I railroads of the United States in the first seven months of 1941 had a net income, after interest and rentals, of $244,376,852 as compared with $3,441,371 in the corresponding period last year, according to the Bureau of Railway Economics of the Association of American Railroads. The seven-months net railway operating income, before interest and rentals, was $539,853,203, against $303,248,276. Operating revenues in the seven months were $2,909,870,122, compared with $2,362,600,538 in the same period in 1940, and operating expenses amounted to $1,988,383,842 against $1,759,915,321. Class I railroads in the Eastern district in the seven months had a net income, after interest and rentals, of $141,002,128, compared with the sum of $56,627,147. In the Southern district the corresponding net income of Class I railroads was $42,042,227, compared with a deficit of $1,348,440 in the first seven months of 1940 Western district Class I railroads had in the seven months a net income of $61,332,497, compared with a deficit of $51,837,336 in the same period in 1940.

Later Train for Press Workers.—London Transport have arranged for the last train on the Piccadilly Line to leave Holborn station at 12.20 a.m. instead of 12.14 a.m., arriving at Cockfosters at 12.51 a.m. This change, which came into operation last Monday, November 3, is being made as an experiment to meet a request of newspaper late workers.

L.N.E.R. Hotel Fire at Aberdeen.—The Palace Hotel at Aberdeen, well known before grouping as one of those owned by the Great North of Scotland Railway, was seriously damaged by fire early on Friday morning, October 31, and six persons lost their lives. The L.N.E.R. stated that the fire broke out in the grill service room just before midnight and spread to the kitchen. The roof and three-quarters of the first and second floors were destroyed.

Mr. Stanier's Presidential Address.—In the editorial article which appeared under the above heading on page 432 of our issue of October 31 reference was made to some L. & Y.R. locomotives to which superheating had been applied in 1908. Mr. Stanier points out that we were in error in using the term low superheating as in this case the degree of superheat would more correctly be described as high in comparison with what was being used by Churchward on the Great Western Railway.

Hurst, Nelson & Co. Ltd.—This company has increased its investment in wagons from £342,423 to £450,288 by the purchase of further wagons and rights in hiring agreements. Lt.-Colonel Arthur N. Forman, presiding at the recent annual general meeting, said that at the beginning of October, 1940, the company acquired the wagons of the Scottish Wagon Co. Ltd., together with its interest in certain hiring agreements relating thereto. This transaction had made a satisfactory contribution to the year's results. The dividend on the investment in Wagon Repairs Limited had been maintained at the same level as in former years. Notwithstanding the serious disturbance in production caused by the fall of France, the works had been engaged to capacity since early in the present year.

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OFFICIAL NOTICES

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The Buenos Ayres Great Southern Railway Company Limited.

THE Directors of the Buenos Ayres Great Southern Railway Company Limited, hereby give notice that the Register of Debenture Stockholders of the Company will be closed from Monday, the 10th November to Monday, the 17th November, 1941, both days inclusive.

By order of the Board,
N. F. E. GREY,
Secretary.

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Friday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

Contracts and Tenders

The Louisiana Southern has ordered one 45-ton diesel-electric locomotive from the General Electric Company.

The Canadian Pacific Railway has placed an order for 50 70-ton hopper wagons with the Eastern Car Company.

The National Railways of Mexico are inquiring for 100 50-ton flat wagons. These are in addition to inquiries now outstanding for 1,000 50-ton box wagons and for 150 40-ton stock wagons and 100 50-ton gondola wagons, previously reported in THE RAILWAY GAZETTE.

Class I railways on September 1, 1941, had 92,033 freight wagons on order, the Association of American Railroads announces. On August 1, 1941, they had 89,416 on order, and on September 1, 1940, 18,456. The wagons on order on September 1 this year consisted of 59,490 box, 26,464 coal, 399 stock, 2,284 flat, 2,316 refrigerator, and 1,080 miscellaneous wagons. Class I railways on September 1 this year also had 611 locomotives on order of which 317 were steam and 294 electric and diesel. On August 1, 1941, there were 603 locomotives on order, of which 300 were steam, and 303 electric and diesel. New locomotives on order on September 1 last year totalled 179: 114 steam and 65 electric and diesel.

In the first eight months of 1941 the railways put in service 49,134 new freight wagons compared with 44,791 in the same period last year. Of the total number of new freight wagons placed in operation in the first eight months this year there were 25,785 box, 20,359 coal, 1,458 flat, 1,218 refrigerator, 50 stock, and 264 miscellaneous wagons. In the first eight months this year, the railways also put in service 372 locomotives, of which 84 were steam, and 288 electric and diesel. In the first eight months last year 237 new locomotives were installed, of which 70 were steam, and 167 electric and diesel.

Railway and Other Reports

Bombay, Baroda & Central India Railway Company.—The directors have authorised the payment in January next, in addition to the half-year's guaranteed interest of £1 10s. per cent., of an interim dividend af £1 10s. per cent., for the nine months from April 1, 1941, until the termination of the company's contracts with the Secretary of State on December 31, 1941, making a total payment of £3 per cent. less tax.

Companhia de Moçambique. The report for the year 1940, issued by the Council of Administration in Lisbon, shows receipts 71,569 contos, and expenses 58,751 contos. leaving a gross profit of 12,818 contos, or 498,429 escudos less than in the previous year. After crediting 5 per cent. to statutory reserve, and 2½ per cent. to the State, the balance of 9,972 contos is carried to the properties and rights acquired account.

British Electric Traction Co. Ltd.—Interim dividend of 15 per cent. less tax on the deferred ordinary stock (the same). This and the interim dividends of 3 per cent. actual on the 6 per cent. cumulative participating preference stock and of 4 per cent. actual on the 8 per cent. non-cumulative preferred ordinary stock are payable on December 12.

Staff and Labour Matters

Essential Work Order for Railways

The Ministry of Labour & National Service has made the Essential Work (Railway Undertakings), 1941, Order, No. 1602, applying the Essential Work (General Provisions) Order with certain modifications to the railway industry. The Order is dated October 9, 1941, and the following undertakings were scheduled under the Order as from Monday, October 27, 1941:—

The Great Western Railway Company.
The London & North Eastern Railway Company.
The London Midland & Scottish Railway Company.
The Southern Railway Company.
The Cheshire Lines Committee.
The Railway Clearing House.
The East Kent Light Railways Company.
The Kent & East Sussex Light Railway Company.
The Shropshire & Montgomeryshire Light Railway Company.
The Mersey Railway Company.
The King's Lynn Docks & Railway Company.

The Order applies to all the employees of the above undertakings except (*a*) staff employed in railway-owned hotels; (*b*) staff covered by the Essential Work (Merchant Navy) Order, 1941; (*c*) port transport workers registered under a scheme approved by the Minister of Labour & National Service under the Dock Labour (Compulsory Registration) Order; and (*d*) tippers, teemers, and trimmers.

The modifications of the general Order are to give effect to the desire of all parties in the railway industry that the scheduling of railway undertakings under the Essential Work Order should not interfere with the existing agreed disciplinary arrangements in the industry, and, for this purpose, the railway Order modifies the disciplinary provisions of the general Order in their application to railway undertakings.

Details of the provisions of the General Order were given in our issue of March 14, the purpose of the Order being to prevent loss of production owing to unnecessary turnover of labour and the effect of the scheduling of the railway undertakings is briefly that:—

(i) Except in cases of serious misconduct the employment of any person cannot be terminated except with the permission, in writing, of a National Service Officer.

(ii) A person employed in the undertaking shall not leave his employment except with the permission of the National Service Officer.

(iii) Every person employed in the undertaking is to be paid his normal wages if he is (*a*) capable of and available for work; and (*b*) willing to perform any services outside his usual occupation which in the circumstances he can reasonably be asked to perform during any period when work is not available for him in his usual occupation in the undertaking.

British and Irish Railway Stocks and Shares

Stocks	Highest 1940	Lowest 1940	Prices Oct. 31, 1941	Prices Rise/Fall
G.W.R.				
Cons. Ord.	52	22½	40	—
5% Con. Pref. ...	103½	58	102½	+ 2
5% Red. Pref. (1950)	105½	88	103	—
4% Deb.	107½	90½	111½	—
4½% Deb.	108½	96½	113	—
4½% Deb.	114¾	96	117½	—
5% Deb.	124	106	130	—
2½% Deb.	66½	57	67	—
5% Rt. Charge ...	117¾	97	127½	+ 1
5% Cons. Guar. ...	117	90½	125½	+ 1
L.M.S.R.				
Ord.	24⅞	9	15½	+ ½
4% Pref. (1923) ...	60½	21⅜	48½	—
4% Pref.	70¾	35	62½	+ 1
5% Red. Pref. (1955)	94½	60	91½	—
4% Deb.	101¾	81	104½	—
5% Red. Deb. (1952)	109½	102	109½*	— 1
4% Guar.	93¾	65	95½	—
L.N.E.R.				
5% Pref. Ord. ...	8⅜	1½	2¾	—
Def. Ord.	4⅜	1½	1½	—
4% First Pref. ...	60	20	47½	—
4% Second Pref. ...	22⅜	6½	17	—
5% Red. Pref. (1955)	80	34½	76½	—
4% First Guar. ...	86½	56	87½	+ 1
4% Second Guar. ...	77½	37	75½	—
3% Deb.	73½	54½	77½	—
4% Deb.	97⅜	74	103½	+ 1
5% Red. Deb. (1947)	107	96¾	103	— ½
4½% Sinking Fund Red. Deb.	104	98	101½	—
SOUTHERN				
Pref. Ord.	79	34	61½	—
Def. Ord.	22½	7	13½	—
5% Pref.	104½	58⅜	100½	+ 1
5% Red. Pref. (1964)	105	85	103½	—
5% Guar. Pref. ...	116¾	90	125½	+ 1
5% Red. Guar. Pref. (1957)	114⅞	94	112½	+ 1
4% Deb.	106¾	84½	110½	+ 1
5% Deb.	122½	100	127½	+ 1
4% Red. Deb. (1962–67)	106	96½	106	+ 1
4% Red. Deb. (1970–80)	106⅜	93	106	+ 1
FORTH BRIDGE				
4% Deb.	95½	87	96½	—
4% Guar.	93½	81½	97½	—
L.P.T.B.				
4½% "A"	116	103	117½	+ 2
5% "A"	121½	107	129	+ 5½
4½% "T.F.A." ...	105½	101	101½	—
5% "B"	116	102	116½	+ 2
"C"	65½	24	40	—
MERSEY				
Ord.	26	18½	20½	—
4% Perp. Deb. ...	92½	84½	95½	—
3% Perp. Deb. ...	68	63	70½	—
3% Perp. Pref. ...	57	50½	56	—
IRELAND				
BELFAST & C.D.				
Ord.	4	3	4	—
G. NORTHERN				
Ord.	4½	1½	13⅜	+ 1⅜
G. SOUTHERN				
Ord.	12½	4	9½	+ ½
Pref.	15½	6	11¾	+ 1½
Guar.	36	15	36½	+ 2½
Deb.	55½	40	56½	1½

* ex dividend

Railway Stock Market

No important change has developed in the conditions ruling on the Stock Exchange. The war news from Russia and uncertainty as to the position in the Far East have maintained an attitude of caution, and in the circumstances the volume of business has remained very small. On the other hand, general confidence in the future, and willingness to take more than a short view, were again reflected in absence of any heavy selling. In fact, in many directions, securities continued to be in small supply in the market. On balance, price movements have been very moderate. Among home railway issues, buying again centred on the prior charges, which moved higher; buyers were attracted by the fact that yields on these stocks still compare favourably with those obtainable on other front rank investments. On the other hand, very small movements were again shown by the junior stocks, although in some instances the latter were fractionally higher than a week ago. There is, however, continued confidence that dividends for the current year are likely to be maintained, granted there is no very heavy air raid damage during the next few months. The assumption is, of course, that the bulk of the liability in respect of war damage will not be charged to revenue, but will be debited either to reserves or possibly to capital expenditure account. It is possible that the railways may not follow a uniform course as to provision for war damage. Therefore, even when details are published of the scheme for war damage insurance of public utility concerns, there will still be a good deal of uncertainty as to the dividend prospects of junior stocks of the railways. Since publication of the revised financial agreement, the prior charge stocks have risen sharply, and most of the debentures are above the highest prices recorded last year. On the other hand, many of the junior and kindred stocks are as much as ten points below the best prices touched last year. Great Western 4 per cent. debentures, for instance, are now five points above last year's highest, but L.M.S.R. ordinary shows a decline of nearly ten points compared with last year's best; and larger declines are shown by Southern preferred, and also by L.M.S.R. and L.N.E.R. preference issues. As to guaranteed stocks, which are, of course, cumulative as to dividend and continue to give quite attractive yields despite their undoubted investment merits, L.M.S.R. guaranteed is now 96, or slightly above the highest in 1940. Moreover, L.N.E.R. first and second guaranteed are around last year's highest.

Compared with a week ago, Great Western ordinary was fractionally lower at 39¾, but there has been further buying of the preference stock, which improved from 101½ to 103, and the debentures held last week's gain to 112½. At 15, L.M.S.R. ordinary was fractionally better on balance, and the 1923 preference was unchanged at 48½; the senior preference was slightly better at 62½. Elsewhere, L.M.S.R. 4 per cent. debentures at 105 recorded a fractional gain. L.N.E.R. 4 per cent. debentures were higher at 103½, and the first and second guaranteed issues gained half a point to 88 and 76½ respectively. On the other hand, L.N.E.R. second preference was 16¼, compared with 16¾ a week ago, although the first preference was unchanged at 47½. In other directions. Southern deferred declined fractionally to 13, but the preferred was maintained at 62. Southern 5 per cent. preferenece further improved to 101½, and the debentures were again higher at 111. Further gains were recorded in London Transport prior charges, and the 4½ per cent. "A" was 118, as compared with 116¾ a week back; but elsewhere the "C" stock at 39¾ lost part of the improvement shown a week ago.

Although very little business was passing in foreign railway stocks, there was a better tendency in those of the South American companies, sentiment in relation to which was assisted by the view that as time proceeds, the U.S.A. is likely to purchase further large quantities of products of the Latin-American countries.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1940-41	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1940	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1940	Prices: Lowest 1940	Prices: Oct. 31 1941	Prices: Yield % (See Note)
				£	£		£	£	£					
[U.S.A., South & Central America]	Antofagasta (Chili) & Bolivia	834	26.10.41	17,130	+ 3,260	43	828,320	731,270	+ 97,050	Ord. Stk.	11½	3½	7½	Nil
	Argentine North Eastern ...	753	25.10.41	ps. 187,900	+ ps.26,400	17	ps. 3,420,500	ps.2,957,400	+ p 463,100	,,	3½	1	3	Nil
	Bolivar	174	Sept., 1941	4.137	+ 347	39	34,854	35,970	− 1,116	6 p.c. Deb.	6½	5	6½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	8	5	6½	Nil
	Buenos Ayres & Pacific ...	2,801	18.10.41	ps.1,250,000	+ ps.135,000	16	ps.20,370,000	ps. 17,924,000	+ ps.2,446,000	Ord. Stk.	4½	1	5½	Nil
	Buenos Ayres Great Southern	5,082	18.10.41	ps.2,015,000	+ ps.148,000	16	ps.33,272,000	ps.29,694,000	+ ps.3,578,000	Ord. Stk.	10¾	3	8½	Nil
	Buenos Ayres Western ...	1,930	18.10.41	ps. 912,000	+ ps.236,000	16	ps.12,922,000	ps.9,993,000	+ ps.2,929,000	,,	8¾	2	5½	Nil
	Central Argentine	3,700	25.10.41	ps. 1,957,950	+ ps.606,850	17	ps.31,224,150	ps. 23,712,950	+ ps.7,511,200	,,	8¾	2	5½	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	¼	2	Nil
	Cent. Uruguay of M. Video	972	18.10.41	22,878	+ 813	16	348,469	291,131	+ 57,338	Ord. Stk.	3½	¼	5½	Nil
	Costa Rica	188	Sept., 1941	21,437	+ 5,073	13	68,996	57,220	+ 11,776	Stk.	23½	14	13	15½
	Dorada	70	Sept., 1941	12,000	− 200	39	112,750	110,700	+ 2,050	1 Mt. Db.	99	97½	97	6½
	Entre Rios	808	25.10.41	ps.262,300	+ ps.44,700	17	ps. 5,005,700	ps. 4,028,400	+ ps.977,300	Ord. Stk.	4	½	4½	Nil
	Great Western of Brazil ...	1,016	25.10.41	15,000	+ 1,400	43	399,600	429,000	− 29,400	Ord. Sh.	4/-	11-	8	Nil
	International of Cl. Amer. ...	794	Aug 1941	$404.818	+ $49.964	35	$3,889,669	$4,079.630	− $189,961	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	Ist Pref.	9d.	9d.	¼	Nil
	La Guaira & Caracas... ...	22½	Sept.,1941	6.180	− 2.060	39	58,005	60,300	− 2.295	—	6	4	—	—
	Leopoldina	1,918	18.10.41	29,786	+ 2,498	42	1,098,598	955,105	+ 143,493	Ord. Stk.	2⅛	⅛	3½	Nil
	Mexican	483	21.10.41	ps. 277,900	+ ps.44,000	16	ps. 4,888,900	ps. 4,276,400	+ ps.612,500	,,	2/11½	1/6	8	Nil
	Midland of Uruguay ...	319	Aug. 1941	12,516	+ 1.310	9	27,026	21,592	+ 5,434	—	—	—	—	—
	Nitrate	386	15.10.41	7,729	+ 2,130	41	115.030	140,686	− 25,656	Ord. Sh.	2½	1	3	4½
	Paraguay Central	274	25.10.41	$3,092,000	− $137,000	17	$56.692,000	$59.848,000	− $3,156,000	Pr. Lt. Stk.	41	36	42½	7½
	Peruvian Corporation ...	1,059	Sept.,941	77,057	+ 13,209	13	214,265	198,447	+ 15,818	Pref.	4	1	4½	Nil
	Salvador	100	Aug., 1941	c47,093	+ c11,877	9	c111,172	c86,683	+ c24,489	—	—	—	—	—
	San Paulo	153½	19.10.41	31,250	− 8,863	42	1,556,231	1,521,512	+ 34,719	Ord. Stk.	50	23	44½	4½
	Taltal	160	Sept.,1941	7,225	+ 5,050	13	16,390	6,725	+ 9,665	Ord. Sh.	15/1½	⅜	⅜	Nil
	United of Havana	1,346	25.10.41	18,582	+ 4,605	17	324,313	262,315	+ 61,998	Ord. Stk.	⅜	¼	2	Nil
	Uruguay Northern	73	Aug. 1941	1,337	+ 358	9	2,693	1.926	+ 767	—	—	—	—	—
[Canada]	Canadian National	23,560	21.10.41	1,322,051	+ 281,655	42	47,861,513	38,695,530	+ 9,165,983	—	—	—	—	—
	Canadian Northern ...	—	—	—	—	—	—	—	—	Perp. Dbs.	86	68	92½	4½
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gr.	105¾	95½	101¼	3½
	Canadian Pacific	17,153	21.10.41	1,023,200	+ 240,600	42	34,514,800	26,551,200	+ 7,963,600	Ord. Stk.	9⅞	4⅛	11½	Nil
[India†]	Assam Bengal...	1,329	—	—	—		—	—	—	Ord. Stk.	99⅜	71	100	3
	Barsi Light	202	Aug., 1941	9,742	+ 2,160	22	77,782	64,620	+ 13,162	—	—	—	—	—
	Bengal & North Western ...	2 093	Sept.,1941	231,525	− 4.522	26	1,530,171	1,514,900	+ 15,271	Ord. Stk.	283	234	307	5½
	Bengal-Nagpur	3,269	10.7.41	222,300	+ 27,943	14	2,552,246	2,417,662	+ 134,584	,,	96	83⅜	100½	4
	Bombay, Baroda & Cl. India	2,986	20.10.41	284,700	+ 28,050	28	5,771,925	5,369,550	+ 402,375	,,	108	99	107½	5½
	Madras & Southern Mahratta	2,939	10 8.41	200,925	+ 63,927	19	2,650,744	2,244,867	+ 405,877	,,	104	97⅛	102½	7½
	Rohilkund & Kumaon ...	546	Sept., 1941	41,025	− 4,737	26	347,627	347.049	+ 578	,,	284	238	300	5½
	South Indian	2,500	10.7.41	160.572	+ 36,257	14	1,424,269	1,268,823	+ 155 446	,,	93¾	83	97½	4½
[Various]	Beira	204	July, 1941	74,593	—	43	727,546	—	—	—	—	—	—	—
	Egyptian Delta	610	31.7.41	7,912	+ 2,864	18	82,025	56,624	+ 25,401	Prf. Sh.	7/10½	⅜	2	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	53	44½	65	5⅜
	Midland of W. Australia ...	277	May, 1941	17,591	+ 3.683	48	167,924	145,304	+ 22.620	Inc. Deb.	88	80	89½	6½
	Nigerian	1,900	28.6.41	44,945	− 12,185	13	697.96	499.238	+ 198,730	—	—	—	—	—
	Rhodesia	2,442	July, 1941	464,690	—	43	4,682,300	—	—	—	—	—	—	—
	South Africa	13,291	20.9.41	810,255	+ 105,750	25	18,575,998	16,738,656	+ 1,837,342	—	—	—	—	—
	Victoria	4,774	June, 1941	953,571	+ 156,386	52	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛ Argentine traffics are given in pesos
† Receipts are calculated @ 1s. 6d. to the rupee